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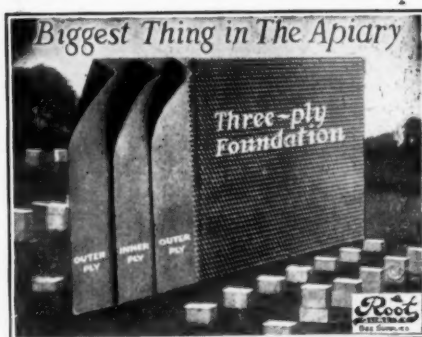
APR 3 1945

DEPT

AMERICAN BEE JOURNAL

April, 1945





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Non-Sagging Non-Stretching

Stretched cells reduce the brood area of combs.

Drones eat up your profits.

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Thrifty bees are guaranteed to please

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Bring Satisfactory Results.



American Bee Journal

HAMILTON, ILLINOIS

April, 1945 Vol. LXXXV, No. 4

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Associate Editors

M. G. Dadant, Frank C. Pellett,
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10% less after May 1st

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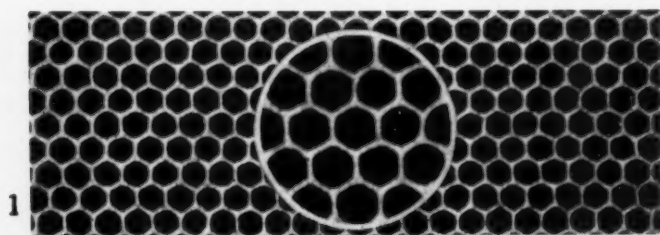
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read by studious honey
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With the American Bee
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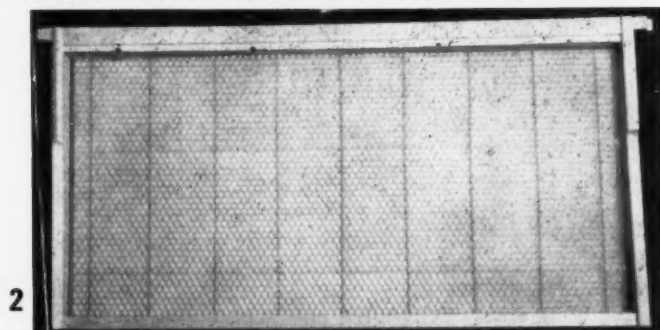
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1

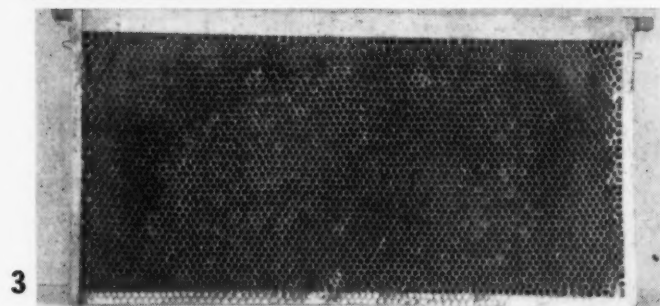
All of this you will like

Nice, straight rows of worker cells that will stay that way just as long as your combs last (1).



2

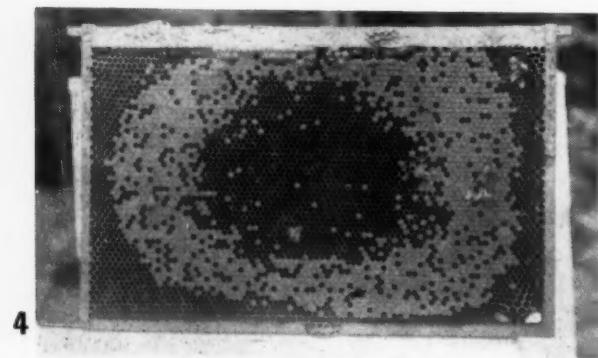
Full sheets of **Dadant's Crimp Wired Foundation** in **Lewis Slotted Bottom Bar Frames** will give you just such combs (2).



3

Combs like this (3) that, after twenty years, are still producing full colonies and carrying full weights of honey.

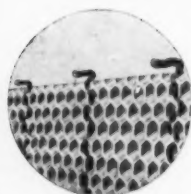
With good queens, brood patterns like this (4) show year after year.



4

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Try it — **FREE FOR THE COST OF MAILING.** . . Send us your name and address, with 15 cents to cover the cost of wrapping and postage, and we will send you, without charge, a full sheet of Dadant's Crimp-wired Foundation, properly assembled in a regular Lewis frame. You can give it to your bees, at the first opportunity. They will tell you how good it is.



These steel hooks hold the foundation tightly in the frame



Behind the topbar wedge the hooks safeguard any weight the comb exerts.



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PURE ITALIAN QUEENS AND PACKAGE BEES

Due to heavy booking we have sold our supply for April and early May shipments. Can accept additional orders for shipment after May 10th.

PRICES			
Queens 1 to 49	\$1.10	50 and up	\$1.00
2-Lb. Package with Queen	\$3.45	50 and up	\$3.25
3-Lb. Package with Queen	4.45	50 and up	4.25
4-Lb. Package with Queen	5.45	50 and up	5.25

HOMAN BROS. : R. F. D. 2 : Shannon, Miss.



**H-A Honey Jars move your product
from shelf to home.**

HAZEL-ATLAS GLASS COMPANY

WHEELING, W. VA.

Three-Band Italian Queens For April and May of Highest Quality

We are sold out on package bees until May 20th. 1 to 3 3 to 24 24 up
Can only accept 3-lb. package orders thereafter. \$1.15 \$1.10 \$1.05

E. R. RALEY, 710 W. Altamaka St., Fitzgerald, Ga.

**Help the Red Cross
GIVE GENEROUSLY**

1945

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We should be able to handle promptly any queen orders after June 1st.

You may be sure that we will do all we can to get out every package and queen possible, consistent with quality.

ITALIANS

PRICES Through May 20th

CAUCASIANS

Lots of	Queens	2-Lb.	3-Lb.	4-Lb.	5-Lb.
1-24	\$1.25	\$4.00	\$5.10	\$6.20	\$7.30
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100 up	1.05	3.50	4.50	5.50	6.50

For queenless packages deduct price of queen

THE STOVER APIARIES MAYHEW, MISSISSIPPI

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PACKAGE BEES AND QUEENS ANY DATE DURING THE
MONTH OF MAY

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NEAL'S APIARIES : Hamburg, La.

Do you know about the LORD'S ACRE PLAN

for support of the rural church? Get monthly reports of it in the

Farmers Federation News

3 years \$1 or send 2 cents stamp for sample copy. Address ASHEVILLE, N. C.



Feed your bees POLLEN SUBSTITUTES

Bees require large amounts of pollen in the spring for brood rearing, and if your bees are short they will not build up as rapidly as they should.

GOVERNMENT AUTHORITIES RECOMMEND FEEDING POLLEN SUBSTITUTES STARTING MARCH 10TH TO 20TH IN REGIONS WHERE THE MAIN HONEY FLOW BEGINS IN JUNE.

We are publishing a circular giving latest information and prices on substitutes we have in stock for quick shipment.

THE WALTER T. KELLEY CO., Paducah, Ky.



This photo shows a portion of one of our queen yards containing over 6,000 nuclei

ITALIAN PACKAGE BEES AND QUEENS

2-Lb. with queen ----- \$4.00
 3-Lb. with queen ----- 5.00
 Extra queens, each ----- 1.25

Several thousand extra queens available. Write for prices in large orders.

OVERBEY APIARIES, Bunkie, Louisiana

STATEMENT OF THE OWNERSHIP MANAGEMENT, CIRCULATION, ETC., RE- QUIRED BY THE ACTS OF CONGRESS OF AUGUST 24, 1912 AND MARCH 3, 1933.

Of American Bee Journal, published monthly
 at Hamilton, Illinois, April 1, 1945.

STATE OF ILLINOIS, } ss.
 County of Hancock. }

Before me, a notary public in and for the
 state and county aforesaid, personally ap-
 peared M. G. Dadant, who, having been duly
 sworn according to law, deposes and says
 that he is the business manager of the
 American Bee Journal and that the follow-
 ing is, to the best of his knowledge and
 belief, a true statement of the ownership,
 management, etc., of the aforesaid publi-
 cation for the date shown in the above
 caption, required by the Act of August 24,
 1912, as amended by the Act of March 3,
 1933, embodied in section 537, Postal Laws
 and Regulations, printed on the reverse of
 this form, to wit:

1. That the name and addresses of the
 publishers, editors, and business managers
 are:

Publishers: American Bee Journal, Ham-
 ilton, Ill.

Editors: G. H. Cale, Hamilton, Ill., F. C.
 Pellett, Hamilton, Ill., M. G. Dadant, Ham-
 ilton, Ill., R. A. Grout, Hamilton, Ill.

Business Managers: M. G. Dadant, Ham-
 ilton, Ill., J. C. Dadant, Hamilton, Ill.

2. That the owners are:

H. C. Dadant, Hamilton, Ill.

J. C. Dadant, Hamilton, Ill.

V. M. Dadant, Hamilton, Ill.

M. G. Dadant, Hamilton, Ill.

C. S. Dadant, Hamilton, Ill.

R. A. Grout, Hamilton, Ill.

L. C. Dadant, Hamilton, Ill.

R. H. Dadant, Hamilton, Ill.

Louisa G. Saugier, Hamilton, Ill.

3. That the known bondholders, mortga-
 gees and other security holders owning or
 holding one per cent or more of the total
 amount of bonds, mortgages, or other se-
 curities are: None.

4. That the two paragraphs next above,
 giving the names of the owners, stockholders,
 and security holders, if any, contain not only
 the list of stockholders and security holders
 as they appear upon the books of the
 company but also, in cases where the stock-
 holder or security holder appears upon the
 books of the company as trustees or in any
 other fiduciary relation for whom such trustee
 is acting, is given; also that the said two
 paragraphs contain statements embracing
 affiant's full knowledge and belief as to the
 circumstances and conditions under which
 stockholders and security holders who do
 not appear upon the books and securities in a
 capacity other than that of a bona fide
 owner; and this affiant has no reason to be-
 lieve that any other person, association, or
 corporation has any interest direct or in-
 direct in the said stock, bonds or other
 securities than as so stated by him.

(Signed) M. G. DADANT,
 Business Manager American Bee Journal,
 Sworn to and subscribed before me this
 20th day of March, 1945.

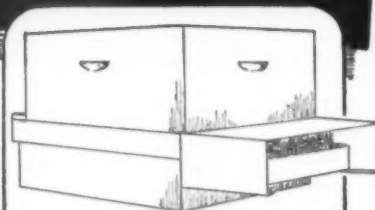
MINNIE S. KING, Notary Public
 My commission expires Nov. 18, 1945.

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Soy Flour (Pollen Supplement) and Pollen Traps

We were the pioneers in offering
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 recognized early the valuable work
 of Dr. Farrar in this field. The feeding
 of pollen supplement is here to stay.
 Our advice is for each beekeeper to
 trap his own pollen. We have been
 unable to find a satisfactory com-
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Plan your supplementary feeding
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 of Staley's Lo-Fat High Protein expel-
 ler processed flour for beekeepers.
 Packed in 5, 10, 25, 50, and 100 pound
 sizes.



With the improved 10 frame Killion
 pollen-trap you can be assured of
 sufficient pollen so important in de-
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 time for the honey flow. Sturdy
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The coupon below will bring you an
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 prices on pollen traps and Soy Flour.
 Mail it today.

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 PARIS, ILLINOIS**

*Send coupon
 today*

Killion & Sons Apiaries
 Paris, Illinois

Please send me, without cost, complete
 information covering the use of Soy Flour
 and pollen traps in bee feeding.

Name _____

Address _____

City _____ State _____

A-B-J Ads Bring Results

For Customers Only

A GAIN we are in the undesirable position of not being able to fill orders for wooden goods except from former customers. Restrictions imposed by the War Production Board will limit us greatly in the manufacture of bee supplies, indicating the great need for lumber to supply our troops.

This limitation does not now apply to bee comb foundation. Whether or not it will apply to other items will depend in part upon supplies of material and the manpower to work them. Every effort will be made to fill orders, but due to the short supply we may have to reduce shipments to any one individual in order to equitably distribute the supply available.

A large stock of comb honey cartons and glass jars (particularly in the 5-pound size) is available. Smokers and veils are in fair supply. Send us your list of needs and we will gladly tell you what we can ship. Never before in the history of this company have we been forced to make such an announcement. How early in 1945 relief may come is problematical.

However, we know you will bear with us if such restrictions imposed by government agencies will help in saving a single life or shortening the war even one day. We can sympathize with you who have sons or daughters in the service. A total of 67 of our employees are now in the armed services of U. S. A.

Write for new low prices on glass containers

G. B. LEWIS COMPANY

WATERTOWN, WISCONSIN

Box 825, Albany, 1, N. Y.; Box 683, Lynchburg, Va.; 214 Pearl St., Sioux City, 14, Iowa

How Can Research Make Substantial Contributions to Beekeeping?

CLOSER cooperation between the beekeeper and the other groups like agricultural colleges, packers, manufacturers, etc., in the way of research is necessary. There are two important problems in the way of development. First, packing and distribution. Second, elimination of foulbrood. Distribution has been improper and everybody is responsible. There is not enough cooperation between those interested in distribution which has resulted in a poor market. We should have graded honey and this should be no discrimination against dark honey of a No. 1 grade. Perhaps blending is the solution. As far as resistance in bees is concerned, it is only partial so far, yet is promising. In time, American foulbrood should only be a minor problem.

Wm. Frank, Iowa.

— V —

The Nineteenth Century was the era of individualism and science. It was punctuated by such names as McCormick, Langstroth, Marconi, Tesla, Lister, Howe, Morse, Edison. Thomas Edison probably was the first to place emphasis on research irrespective of the individual and so employed many technical experts for his work. Now we have hundreds of experimenters cooperating in one thing.

It is becoming evident that the twentieth century is to be an era of such research by large organizations.

Research in beekeeping is hampered by lack of financial backing. Also there has not been enough consolidated effort by the allied beekeeping industries to warrant a correct approach to our problems.

With so much money spent in the development of legumes, why cannot something be done by all of us to improve the nectar content of some of the clovers? We do not need gadget type research, but revolutionary research. Too big for individuals and in which few individuals have the time and training to undertake. Our final results

in disease research may show the resistant bees of the present entirely ineffectual. We need to know more about the pollen and about breeding with its complicated hormones, chromosomes, and specialized procedure.

We need more beekeepers back of the American Honey Institute, the Federation, and the research by state government.

There is no reason why further research in pollen substitutes in conjunction with the use of water or sugar and molasses should not make it possible for the northern beekeeper to producer his booster bees early in the season in a suitable thermostatically controlled beehive. Since the time I have been keeping bees, I have been much impressed by the chaotic condition of the industry. Yet lately I have noticed an increasing tendency for individuals to cooperate with each other. I have great faith in our associations and overhead organizations. Everyone of us should lend a hand in the support of these institutions.

Harry Starnes,
Indiana.

— V —

I think individual research should be encouraged. To those beekeepers who cannot afford to put money into research work, help from the state entomologist specialist should be given for the needed special equipment or literature.

A number of states do not allot enough money to keep an apiary to study regional conditions. For instance, in Oklahoma an apiary was established and experiments carried on for a number of years, but each year a new man had to be broken into the job because better paying employment could be found elsewhere. If such work had been carried out over a period of years under one individual, good results would have been obtained. Therefore let us ask beekeepers themselves

to devote a little time to research and everyone will profit.

Wm. Reuter, Jr.
Oklahoma.

— V —

If pollen could be prepared to be sold in larger amounts to beekeepers so that they may feed the bees in a time of need, many colonies could be built up to take care of the honey crop of the year.

More beekeepers should be willing to help in some way in research into beekeeping methods. Beekeepers need to be more cooperative. We should not let a few do the work of all.

Mahlon W. Carlock,
Indiana.

— V —

I think there ought to be research for a longer tongued bee, a bee which would work in other than the usual bloom, like red clover; or for the breeding of clover with corolla tubes of the right length. This would make the difference between a dribble of nectar and a profitable crop in many sections.

Geo. M. Moffit,
Ontario.

— V —

I think breeding stock is of major importance. Also more research apiaries should be established by state associations and universities for the purpose of developing better bee stock, studying bee diseases, and solving beekeeping problems. Improving bee pastures is of major importance. The proper selection of plants should help correct this. There should be some way to interest farmers in planting more clovers and vetches to increase nectar and pollen sources which will work for both the farmer and the beekeeper.

Distribution has its place among the important factors of research. The American Honey Institute should undertake this, supported by an ample income. It is our principal means of nation-wide publicity for honey. Until the industry assures the public of a dependable supply,

WHAT DO YOU THINK?

See what you can do with this one next time: "What is the future of the package bee industry?" (Package vs. divides; Can the package equal the overwintered colony? Should the bees be killed and the packages used to replace as a means of cutting cost? Package vs. nuclei. Anything else you can think of.)

What can you propose for this department? Give us something to think about. Regular contributor payments will be made for whatever is published. What cannot be used at once may be used later. Send in your contribution by April 15.

honey will be forced into a back seat. The greatest need is cooperation among all branches of the industry—the packer, the producer, the manufacturer, the breeder, and the big man and small man.

W. P. Kinard,
Mississippi.

— V —

I believe supersedure to be one of the main problems of research. This is being studied. We do not have much information about it. It is causing loss to buyers of packages and producers of packages and promotes a fear of failure for those who depend on package bees. We know that bees supersede a queen that has been injured and also that some strains supersede worse than

others. We know that supersedure occurs even though the queens may have been produced by those who know the business well and are trustworthy, and even though the individual queens appear excellent.

I have come to the conclusion that some strains of bees are not suited to some areas. That bees of such strains may be more at fault than the queen which may influence supersedure. That some strains require different management than others and that strains should be selected suitable to the area in which the bees are to be used. Breeders should devote their stock to particular needs instead of having one strain of bees to be used everywhere.

R. E. Newell,
Massachusetts.

— V —

HOW TO FEED SULFATHIAZOLE TO BEES

By L. F. Childers

This is the second of a series of articles on feeding sulfathiazole in a pollen supplement for the eradication of disease. The first appeared in March, page 83.

THE sale of sulfathiazole is regulated by the Food and Drug Act. Civilians cannot buy it without a prescription. See your family physician or veterinarian. They can write you a prescription or give it to you if they wish. The drug is plentiful and it is not expensive. If you have difficulty in convincing these men, see your county agent. Show him Missouri Bulletin 482 issued by the Missouri Experiment Station, Columbia. It is free.

You will need approximately three sulfathiazole tablets to each colony of bees. Large colonies require more. Skim milk powder may be obtained from a bakery or dairy supply house. The correct soybean flour can be obtained from advertisers in this journal.

In treating the disease it is a matter of prime importance to get every bee to have a continuous feeding of treated food until all signs, even dried scales, have disappeared and to keep on feeding until at least a complete cycle of healthy brood has emerged from such cells.

We had two colonies that showed disease again in midsummer but feeding them two half gallon jars of syrup completely removed the infection. These colonies were entirely clean this spring. Watch your colonies. Repeat feedings if necessary.

The kind of pollen supplement you use is a secondary matter. We tried

the Haydak formula which calls for two quarts of water, eight quarts of sugar, one pound of skim milk powder and four pounds of soybean flour. [Other formulae from Haydak are in this issue, page 119—Ed.]

When treating add one sulfathiazole tablet, half gram size. Heat water to about 180° F. Don't boil it or the lime in the water may spoil the drug. I have done some experimenting and found it more expedient after the tablet is dissolved to cool the water to about 130° then dip a little out into another vessel and stir in the milk powder little by little until you have a thin paste. If you have a fine screen wire like a small colander, dump all this paste into it and set it down in the water which should be in a rather large dish pan, and by stirring about the edges, the powder will float out in perfect condition. This is much easier than trying to mix in the larger pan. Next add the sugar and when dissolved add the flour.

A lot of letters have come in about the amount of flour and water to use. In my first article I said to have five quarts of water and four pounds of flour. I meant to have the extra quart to thin the mixture if it was too thick. Someone made up the formula and reported that four quarts of water made it too thin. We checked this and found it was too thin but after forty-eight hours was almost thick enough. Then I made a mixture from the flour I used last season and found that I did need the extra quart. Now this difference is due to the protein content of the two flours, and those of you who use

any of these formulas will have to add more water or more flour as the case may require, since the flours you buy will be made from several mills, from several varieties of beans coming from many localities which is sure to cause a wide variation in the protein content of the flours.

So far as treatment is concerned the supplement is only a carrier. The formula that I have been using to feed about fifty colonies, stretching it out over this new formula, feeds sixty. Cover any surplus to prevent drying. Use it as you need. It will not ferment in the presence of sulfathiazole.

When feeding, smoke the bees away and put the paste directly over the cluster. They will not forage for it if you put it at the side. They like it fresh and it is well to look at the colonies every week to ten days.

There is one best time to treat for disease. That is when the first impulse of spring arrives. This statement could be modified by putting the bees away for winter with treated syrup. In the spring, however, bees are at their minimum in numbers and are hungry. The most difficult time to feed the supplement is when the main flow is on. Then bees and brood are so numerous that larvae will not get the food properly. Under those conditions feed thin syrup in a Boardman feeder or, if you want to, use supplement pushed under the frames.

Use judgment in the colonies to be treated. Those weak in numbers and badly diseased will never pay to treat. We do not advise you to try to salvage such material. It is pure dynamite.

We have not found it necessary however to destroy fine colonies and once clean they stay that way. Any combs with a minimum of disease will readily come clean. If the colony has a surplus of honey, remove it, extract it, return the empty combs and feed heavily. As long as the honey is there the bees will not eat enough of the treated food. A food chamber is a nuisance on a diseased colony. Set it off. The queen is probably right under the escape hole with her brood. Reverse the two hive bodies, if you use two, and put a feeder pail on top to encourage the queen to come up and encourage the bees to clean the comb.

Dr. Haseman and I have treated about a hundred colonies. The first effects are seen on the old bees. They seem to come out of a sort of lethargy; acquire more vigor; look better; are stronger and work with more energy. We want those who try this to make an unbiased observation particularly about the behavior of

(Please turn to page 135)

CAN WE DEPEND ON POLLEN SUBSTITUTES?

By MYKOLA H. HAYDAK

Division of Entomology and Economic Zoology
University Farm, St. Paul, Minnesota

THE questions of pollen substitutes is at the present time one of the most important in beekeeping and the interest in bee nutrition certainly has reached its highest point. Therefore it would be appropriate to inform the beekeepers about the results of our experiments with pollen substitutes. In this research work the procedure was as follows:

Colonies of young bees that had never eaten pollen were isolated in cages and were supplied with various food materials as a substitute for pollen. The development of the bees, their brood rearing activity and their mortality were observed. The results of these feedings were compared with those obtained from similarly established colonies which were fed pollen. Some twenty-five different foods were tested on isolated nuclei and the results obtained showed that the brood rearing was most successful when dried brewers' yeast, dry skim milk, soybean flour or cottonseed meal were substituted for pollen. Since dried brewers' yeast was considerably more expensive and much less available than the other three foods a mixture consisting of four parts of soybean flour and one part of dry skim milk pollen substitute for feeding bees.

As World War II progressed a shortage of dry skim milk developed. It was then that dried brewers' yeast and dried egg yolk were recommended for use in place of dry skim milk. These latter two foods could also be recommended under war conditions because the high prices of honey made it possible for the beekeeper to use more expensive foods.

In view of these developments it seemed wise to again check and compare the efficiency of various mixtures recommended as food for bees and an entirely new set of experiments was started at the University of Minnesota Agricultural Experiment Station in July, 1944. Nuclei, containing about two pounds of young bees which had never eaten pollen, were placed in wire screen cages and various foods were tested as to their value in brood rearing. Pollen, dry skim milk and dried brewers' yeast used in animal feeding (animal yeast) were each mixed with expeller processed soybean flour at the rates of 1:4 by weight, while dried brewers' yeast for human consumption (medicinal yeast) was mixed with expeller processed soybean flour in the proportions of 1:9 by weight. The experiments were run in duplicate. Each nucleus was

headed by a good laying queen. The experiment with each colony continued thirty days, starting from the time when the first sealed cell was noticed in the colony. The total number of sealed cells and the number of larvae in open cells were counted and recorded every ten days. The results of these observations (total brood rearing) is present in the above table.

Procedure for Preparing Pollen Substitute

Ingredients

1. Soybean flour produced by the expeller method or soybean flour from which the fat has been extracted with a solvent and the flour heated afterwards. The fat content of the flour should be 5-7 per cent.

Table 1. Total brood rearing activity of experimental colonies

Supplement to soybean flour	Total number of sealed cells	Total number of unsealed cells	Total brood count cells	Brood production index	
				For sealed cells	For total brood count
Dried skim milk	1278	1046	2324	1.0	1.2
Pollen	1238	702	1940	1.0	1.0
Medicinal yeast	2440	1144	3584	2.0	1.8
Animal yeast	2105	2231	3845	1.7	2.0

By assigning the numerical value of one point to the group with the lowest brood count and then by dividing the results of the brood counts from other groups by this lowest number a system of indices was established which gives a simple numerical relation of the food efficiency of various pollen substitutes.

From these results it is evident that dry skim milk is about equal to pollen as a supplement to soybean flour, while dried brewers' yeast is about twice as effective as either the dry skim milk or pollen.

It was then decided to test the efficiency of the dried brewers' yeast mixture still further. Several of the nuclei used in the previous experiment were continued in the greenhouse on pollen substitute (dried brewers' yeast-soybean flour mixture) cakes. These colonies dwindled considerably as might be expected of colonies kept in confinement. Nevertheless on November 1 all of them were still rearing brood normally. On November 22 the strongest one of them still had thirty-nine sealed cells and seventeen larvae in all stages. The remaining colonies had stopped their brood rearing activities, because only the queen and a few bees remained in each nucleus.

It is quite evident from the 1944 experiments that dried brewers' yeast-soybean flour mixture proved to be a very efficient pollen substitute. On the basis of these experiments the following directions and formulae are recommended:

2. Dry skim milk. That produced by the spray process is preferred, but in an emergency any kind of dried milk can be used.

3. Dried brewers' yeast

a. Dried brewers' yeast for human consumption (designated herein as "medicinal" yeast).

b. Dried bitter brewers' yeast for animal consumption (designated herein as "animal" yeast).

Thoroughly mix the ingredients in preparing any of the following formulae:

Formula 1

Soybean flour 4 parts by weight
Dry skim milk 1 part by weight

Formula 2

Soybean flour 9 parts by weight
Medicinal yeast 1 part by weight

Formula 3

Soybean flour 6 parts by weight
Animal yeast 1 part by weight

The most convenient way of feeding pollen substitute to colonies outside is to offer it dry. The substitute should be placed in shallow trays (these can be made by cutting down the sides of corrugated paper boxes) and offered to the bees in a sunny and protected place in the apiary. Some of the mixture will be wasted by the bees around the collecting place, especially on windy days. This loss can be minimized by spreading canvas under the trays.

A more economical method of feeding
(Please turn to page 123)



Beekeeper's portable honey tank unloading at the pool depot.



Table top truck with square ton tanks.

HANDLING HONEY IN BULK

THE HONEY POOL OF WESTERN AUSTRALIA

REAIZING the necessity of meeting the shortage caused by the diminishing supply of tin and also the desirability of economizing in the handling of honey, the Trustees of the Honey Pool of Western Australia have experimented with transportation and blending of honey in bulk instead of using the 60 pound cans. Experience indicates an economical system of bulk transportation can be used in trial loads that save the producer considerable on his container costs.

These pictures show new methods. A one H. P., two-stroke motor bike engine coupled with a chain drive to a three speed motor bike gear box, is mounted on a suitable movable base. The gear box is coupled with the chain drive to a one inch rotary geared pump fitted with a detachable suction hose and a one inch copper delivery pipe. The three speed gear box handles honey of different densities. This portable outfit weighs 105 pounds.

We fitted an ordinary table top truck with three square reinforced galvanized iron tanks with a capacity of one ton of honey to each tank.

Those producers who want to transport in bulk bought storage tanks of about 1,000 gallons each which were installed at the apiaries at ground level or on 2 inch by 1 inch flat wooden strips placed in a spoke wheel fashion to enable the steam to be passed under the bottom of the tanks, should the honey be candied during storage.

These tanks are fitted with a two inch gate valve suitable for con-

necting to the pumping outfit, contact being made by a 2 inch hose connection—the reduction for one inch rotary pump being made by a 2 inch by 1 inch reducing socket fitted to the pump.

If these storage tanks are situated on ground level it enables the producer to bring his honey in bulk and allow the honey to gravitate from his truck to the main storage tanks. For this purpose a ramp has been made alongside the storage tank. It is from these tanks the honey is pumped into the portable tanks, and then transported by road to the depot of the pool.

By means of an overhead conveyor the one ton tanks are lifted off the truck and conveyed adjacent to a 400 gallon pasteurizer where a revolving steam coil stirs, blends and heats the honey at a temperature of 140 degrees F.

After blending, the honey is pumped through a series of strainers and discharged into stainless steel storage tanks for the packing room ready for bottling.

The pumping unit fitted with a power take-off has been successfully used to drive the honey extractor. For this purpose, a pulley was attached to the pump shaft and the extractor driven by a V type belt. The honey runs out of the extractor through a screen into a small drum where the pump delivers the honey through further screens into apiarist's portable tanks to be conveyed to his own storage tanks or alternatively pumped direct to the pool portable tank for conveyance to the pool depot.



Packing honey at the depot from settling tanks into retail containers.



Engine, gear box, and pump for handling the honey.



Roy A. Grout, Associate Editor.

EDITOR

A new editor is added to our staff, Roy A. Grout, who has grown so quietly into his place that even those of us most intimate with the details of the many things that make the American Bee Journal were not aware of just how big a part Grout was contributing. Tardily, perhaps, but gladly, the rest of us here pay some tribute to a faithful ally. Editor Grout will wear no button. Like one south Pacific sailor said, when asked where his ribbons were, "We did not fight for ribbons."

— V —

BECK'S HONEY BOOK

The late Dr. Bodog F. Beck's book, "Honey and Health," has been out of print for nearly two years. We have just received a revision of this book and a reprint. The revision is by Doree Smedley, dietitian.

There has been considerable revision in the dietetic chapters although the book does not yet follow all the teachings of the American Honey Institute. There is, perhaps, too much emphasis still, on the therapeutic and dietetic values of honey and too much criticism of the bad effects of sugar and other sweets.

Those chapters of the book dealing with honey in antiquity and the history of beekeeping particular, are largely written by Dr. Beck. He had made extensive investigations and the book is probably unexcelled in this characteristic.

"Honey and Your Health" is cloth bound, a book of 250 pages and sells at \$3.00. Publishers are Robert M. McBride & Company, in New York. Copies can be obtained of the publishers or from this office as we have secured a stock for our subscribers.



Pump in action, unloading honey from tanker.



Blending and heating tank.

POLLEN CAKES

By CARL E. KILLION—Illinois

WE are going to hear more and read more of pollen cakes, pollen supplement, soy flour et cetera. The proof of the pudding is in the eating of it. We can say the proof of the value of pollen cakes is realized when we start using them. We have operated bees for many years in Indiana where we had an abundance (or we sometimes thought a surplus) of pollen. For anyone at that time to suggest we increase our brood rearing by feeding supplements, we would have been amused at the idea. Now since we operate in an entirely different type of terrain and floral conditions we must now make the feeding of pollen supplements a regular practice. We intend to make it a regular practice if we continue keeping bees in our present location. If we were to return to our former Indiana locations we might want to continue the practise in a modified form, because many pollen plants of a few years ago are very scarce now. For the past fourteen years we have noticed a gradual decline in the amount of pollen stored in our hives.

We have not tried all the various combinations of materials for pollen supplement one may read about in our journals. We have tried a few and expect to try many more in our experimental work. **From the list of materials tried, we have failed to get the results that natural pollen gave when used in amounts of 25% or more with other ingredients.**

Our apiaries are run entirely for section comb honey and to produce a fancy article we must have our colonies in the pink of condition. To produce fancy section honey in poor or medium years our colonies must be in the most excellent condition.

Last season we picked out our very poorest apiary for feeding supplement. At first we were tempted to

eliminate the yard and save the wax because the brood combs were so many years old. We had replaced all colonies with new frames and foundation except this apiary. The season of 1944 was not a good honey year. Our average per colony was 59½ sections. The poorest apiary and the one we gave pollen cakes averaged 64½ sections per colony and these same hives gave us additional brood to assist another apiary. The apiary that was helped was in better condition early in the season than the one fed the pollen cakes. We did not feed more because we did not have the pollen. **As an inspector I do not advise the buying or selling of pollen.** Personally I would just as soon feed a colony honey from an unknown source as to feed pollen from an unknown source. Therefore, I do not advise either. It is very easy for each beekeeper to trap his own pollen in season and preserve it for future needs. From the Government Circular E-531 I have taken this recipe for making fifty one pound cakes:

"Four pounds of dry pollen is softened with 2½ cups of water. This moist pollen is added to 30 pounds of thick syrup made by dissolving 20 pounds of sugar in 10 pounds of hot water. 12 pounds of soybean flour is added to the syrup and pollen moisture and stirred until uniformly mixed to produce a doughlike paste. The pollen does not soften readily in sugar syrup but breaks up when a little water is added. Where the pollen supply is abundant and the percentage can be increased from 25 to 50 per cent less syrup will be needed, if soybean flour is used alone, more syrup will be required." If one has only a few hives, the following amount may be used for making approximately 6 one-pound cakes: 8

ounces pollen, 5 ounces water, 40 ounces sugar, 20 ounces hot water, 24 ounces soyflour.

"The hive cover should be removed and the bees smoked down below the top bars. The soybean pollen paste flattened out into cakes about one half an inch thick should be placed on the top bars directly over the center of the cluster, and covered with waxed or paraffined paper to prevent drying. The inner cover should be inverted to provide space for the cake. New cakes should be added before the previous cakes are consumed. Generally 7 to 10 day intervals are satisfactory"

We are quite often asked how much soyflour will be needed for a certain number of colonies. This is a very difficult question to answer. The only answer that can be given is a rather broad statement and may not apply to the particular individual. We might say anywhere from one to three pounds. There are many variations of conditions that govern the needs of individual colonies or apiaries so one cannot give any exact figure in each particular case.

I am quite sure some will expect the feeding of supplement to be a cure-all for all problems. The feeding of pollen supplements will not correct all the mistakes and failures in honey production. If we fail to use proper equipment, or have poor quality bees, and follow slipshod methods in colony manipulation, we can expect poor returns from feeding pollen supplement.

We refer to any mixture as a supplement and not as a substitute. We agree with Dr. Farrar that "no satisfactory complete substitute for pollen has been found." We often hear people mention using honey as a substitute for sugar. Honey never was a substitute for sugar. Sugar itself could hardly be classed as a substitute for honey. Soyflour, powdered milk, brewers' yeast, or what have you, can never make a complete substitute for pollen.



HONEY RAISIN PIE

1 cup raisins (seeded)
1¾ cups water
¾ cup honey
4 tablespoons cornstarch
¼ cup cold water
½ teaspoon salt
2 tablespoons butter
Juice and grated rind of one large lemon

Combine raisins water and honey; add cornstarch that has been moistened with water, add salt, butter and grated rind and juice of lemon. Bring to a boil and cook till mixture thickens. Cool till lukewarm; pour into pastry lined pie pan, cover with top crust, and bake in a moderately hot oven, (425 degrees) 30 to 35 minutes.

CAN WE DEPEND ON SUBSTITUTES?

(Continued from page 119)

ing pollen substitute in the apiary is in the form of sugar candy. The sugar syrup is made by completely dissolving two parts of granulated sugar in one part of hot water by volume. Thoroughly mix one quart of sugar syrup with one pound of dry pollen substitute. Use one-half cup less of sugar syrup to a pound of dry pollen substitute if the dry skim milk formula is used. The above mixture will provide about 3½ pounds of candy which consists of one pound of dry pollen substitute, about 2 pounds of sugar and ½ pound of water. To prevent drying cover the candy with waxed paper and pat it down so that it will adhere to the surface. Allow to stand overnight so that the liquid will penetrate the dry particles of food. It is then ready for use. With a wide scraping knife spread the candy over a piece of waxed paper in a layer about one-quarter to one-half inch thick and place directly over the cluster on the top bars of the hive so that the waxed paper is on top. The inner cover of the hive should be inverted to provide space for the candy.

Begin by giving about a pound of the candy to each colony. Repeat feedings every seven to 10 days increasing or decreasing the amount depending upon the amount consumed the previous period.

Once started, the pollen substitute (either the candy or dry material) should always be available to the bees as long as natural pollen is lacking. Any interruption in the availability of the pollen substitute may cause a setback in brood rearing.

Dried skim milk pollen substitute is somewhat less effective than pollen supplement. It can be used in cases

of brief emergencies. If pollen substitute feeding is started in March or is necessary for long periods it is advisable to use the dried brewers' yeast formula because it is much more effective.

For detailed information write to the Division of Entomology and Economic Zoology, University Farm, St. Paul 8, Minnesota.

— V —

A BOOK FOR BRITISH BEEKEEPERS

Although it has gone through two editions and the copy we have is of the third edition "The Bee Craftsman," has not reached us before. It is a cloth bound book of 120 pages by H. J. Wadey, Editor of "Bee Craft," one of the foremost British magazines, with a circulation of some 10,000 copies.

In this book Mr. Wadey shows himself to be a practical beekeeper. The book is not printed as a text or is it entirely for beginners. Yet it treats in general the entire subject of beekeeping in a limited space.

Mr. Wadey is favorable to standardization and although he would probably favor the larger size of hive of the Langstroth or Dadant types, he says that "intelligent use of any favorable size of hive will give desirable elasticity of space." Use of porticoes, and frills so common in Great Britain is deprecated as useless and in many ways, harmful.

He states that resistance of bees to poisons may be developed by a combination of calcium and vitamin D.

The book covers the bee colony, handling bees, hives, apiary arrangement, operation, swarm control, handling of finished honey, requeening, queen rearing, bee diseases, all in a condensed form.

The book is published by A. G. Smith, of Kent, and sells at 3 shillings, 6 pence.

GENE KILLION IN INDIA

According to the February issue of the Paris (Ill.) Beacon-News, Sgt. Eugene E. Killion has sent word to his parents that he has been a member of a relay team winning first place in an All-American track meet in Calcutta. This proves that Sgt. Killion's interest in sports still continues. Competing were teams from throughout the China-Burma-India theatre of operations with about 600 GIs, officers and enlisted men taking part. The track and field meet was in the Calcutta football stadium.

Sgt. Killion is a control tower operator in the air corps and has been in India almost a year. He is the son of Illinois inspector Carl E. Killion, of Paris.

— V —

STAMINA

I notice in the December number the article "Stamina of an Italian Worker Bee." Two years ago we went to look at a hive of bees in early spring when a cold wind was blowing. A considerable area in front of the hive was covered with seemingly dead bees. A beekeeper of our acquaintance could not estimate the cause, but he took one of the bees in his hand, warmed it up and the bee showed signs of life. An old blanket was hanging on the fence and I threw it down over the bees on the ground. The next day when the sun was shining brightly, the blanket was removed, and the bees had warmed up and every one got up and went about it's business.

L. H. Goodhue,
Washington.

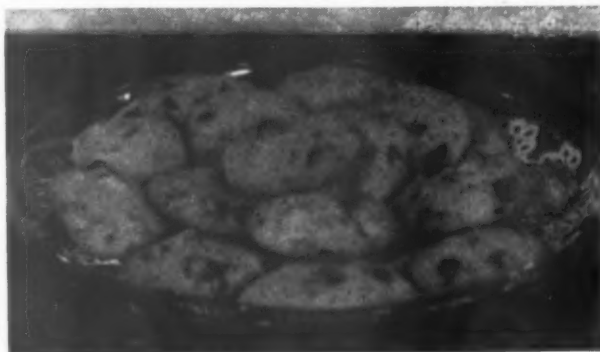
— V —

Join the Red Cross

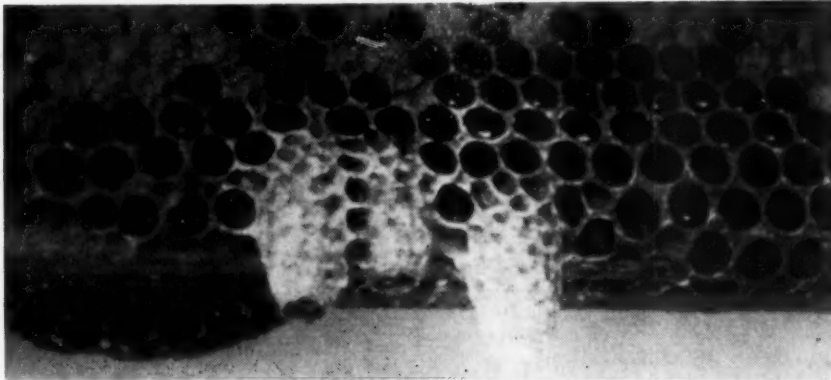
CHOCOLATE CHIP COOKIES (American Honey Institute)

- ½ cup shortening
- ½ cup honey
- 1 small egg
- 1 cup sifted flour
- 1 teaspoon baking powder
- ¼ teaspoon salt
- ½ teaspoon vanilla extract
- ½ cup semi-sweet chocolate chips
- ¼ cup nut meats chopped

Cream shortening and honey until light and fluffy. Add egg and beat well. Sift flour, baking powder and salt twice. Add flour mixture to shortening mixture; add vanilla and blend all well. Fold in chocolate chips and nuts. Chill and drop by teaspoonfuls on greased cookie sheet. Bake at 375 degrees for twelve minutes.



The Production of Queen Bees



SMALL SCALE QUEEN REARING

By E. C. Bessonet

THE question is often faced as to the feasibility of buying queens or producing them. No matter what the decision is, good productive queens are necessary to profitable management of the honey business. To meet the demand queen rearing may be conducted on a small scale with a minimum of special equipment or on a large scale requiring special training and equipment for mass production. The basic fundamentals are the same. The chief difference is in the kind of equipment and in the variations of management.

Foundation stock for breeding purposes is of prime importance, as the results will depend entirely on the stock. No amount of feeding will change the stock. Productive stock, well fed during development combines to bring about good results. Also good stock which provides larvae for developing queens will, nevertheless, if ill fed, fail to produce good queens.

Emphasis must be placed on the stock and on the food.

If you have followed our previous instructions for selecting good breeding stock you have made a start in the right direction. However if the stock with which you are working fails to meet the desired standards I suggest you obtain better stock before you go ahead.

I shall recommend only a few methods to produce queens on a small scale. The operator will understand the problems involved and make any adjustments which are needed. It must be said at the outset that as far as a breeding business is concerned the production of queens on a small scale is unprofitable. Many engage in it for experience or to improve their stock. One must be naturally

inclined to the raising of queens or nothing will be gained from a program of breeding. There will be no satisfaction in it.

It is obvious that queen production on a small scale must be confined to the equipment available, as an investment in special equipment would not be justified for a limited number of queens.

The time queen rearing operations begin will depend on honeyflow. Great difficulties are experienced when queens are produced under unfavorable conditions. Operations must be timed with honeyflow, also. If anything happens in the course of operation, like a sudden change in weather which would stop the flow, negative results will be experienced. I want to emphasize that during the development of queen larvae there must be available either from the field or by artificial supply a continuous source of balanced food.

Queen larvae receive their entire food including a reserve for further development during a four-day period. After that the cells are sealed and nothing can be done to overcome any deficiency which may exist. If the beekeeper depends entirely on nature to provide an adequate supply of food during this critical development period it is nothing but a hit or miss proposition. Remember this, if you use the methods advocated, and nature suddenly interferes with the program. Usually the beekeeper is able to anticipate the beginning of the flow. This gives him a chance to get ready for producing the queens he needs.

Selecting the Colony for Larvae

In the absence of extensive breeding work which provides the operator with data on the value of his stock,

the small beekeeper must resort to ordinary means of selection. Look for the best honey producer. Then determine how far you can carry your selection as to color, behavior and other characters. When you have selected the colony desired place some identifying mark on it so you will know definitely that it is the colony containing the breeding queen.

The recommendations for producing cells on a limited scale will differ from those given for large scale operation. All cell colonies must be very strong, as the amount of bees in the colony will influence cell development. The day before cells are to be grafted, find the queen in a strong colony and raise all but one comb of sealed brood to the second story with a moving screen between. Be sure to have a small entrance so that bees can leave the hive.

In the bottom brood chamber will be combs of honey with plenty of pollen, one comb of sealed brood with empty space on both sides of the brood for the two grafted frames. Spray lightly with sugar syrup after the hive has been so prepared at the time that the grafted frames are put in. This feeding will materially increase the number of cells accepted.

During the following day after the colony has been prepared, a frame of young larvae is taken from the breeding colony to provide larvae for the grafted cells. Two frames with about twenty-four cells is about right and will be properly fed by the bees in the cell colony if there is a fair flow or if feed is provided.

It is difficult to describe the size of larvae to use. With a little experience the operator readily identifies the size for this work. Immediately after the larvae emerges from the egg it is almost straight and then starts to form a curve. Larvae twenty-four hours old are about the size of a pin head and slightly curved. This is the right size to use.

Queens cells can be primed with either water or royal jelly. Better acceptance is obtained with jelly than with water. So after jelly is available it is better to use a small amount of it diluted with a little warm water.

In transferring the larvae great care should be taken to avoid injury to them and every effort possible should be made to lay the larvae in the moist cell on the drop of jelly without burying them. Supply houses offer instruments at small cost for handling the jelly and the larvae and these instruments should be on hand when operations start.

After the cells are grafted (or before) mark the grafting date on the top bar and also in your notebook so you will know when to remove the cells from the cell colony.

(Please turn to page 129)

The Answer

HOW DO YOU FEED BEES AND AT WHAT TIME?

TAKE empty combs from the hive that is to be fed, pour them full of warm sugar syrup, at the close of the day, reducing the entrance so there will be no robbing.

However, I think it is better to leave enough honey in the hive so feeding will not be necessary. On the other hand I like to feed the bees some in the spring even if they have enough. It seems that they build up faster.

Urban J. Ashbacher, Iowa.

— V —

Although some beekeepers now profitably extract all their honey possible and feed sugar syrup to provide winter stores, I believe the best winter stores for bees is good honey in the combs. Put the combs into the colonies that need feed in October before the bees arrange their brood nest. Only when combs cannot be saved should sugar syrup be fed. I give each colony 60 to 75 pounds of honey, some colonies will need more, some less, but stores can be equalized in the spring. Stores should not get below 15 pounds for colony morale. If white combs must be given, put them on the sides with dark combs in the center. Do not place a full body of white combs above a body of dark ones. I know bees will cluster and raise brood in dark combs and may starve with the honey above untouched. I have kept some combs for the brood nest as a policy for twenty-five years and find it helps to build strong colonies.

Ivan Whiting, Illinois.

— V —

Let the bees feed themselves with natural stores. During removal of the crop just before the close of the main flow, be sure the bees have enough. During the fall flow, about the 15th of September here, check all colonies to determine stores by "hefting." Make note of the extra heavy ones with extra surplus. Shift stores from the heavy to the light in late afternoon. Partially filled shallow supers, with the combs removed from the sides, are replaced with empty ones. Be sure there is no disease in colonies from which stores are removed to give to others.

If this is not the condition, bring colonies that are light up with sugar syrup in division board feeders,

giving the syrup in the late day only after the bees have ceased flying. Do this in the fall. Contract the entrances also to prevent robbing.

For the occasional colony that has to be fed in late winter remove the super carefully and insert combs from colonies that have stores to spare or fill empty combs with syrup placed against the cluster at each side. Do this in weather in which it is too cold for bees to fly freely. Contract the entrance.

W. P. Kinard, Mississippi.

— V —

Feeding should be done in the fall. I think using combs of honey and pollen is better than syrup and this will mean reserving stores for this purpose and have it on hand when needed. All colonies in fall may be balanced in stores, save much labor and cost later. The best time to do this is in fall during the flow if possible and after the bees have stopped working for the day. Cut down the entrances of those to be fed. A colony to be fed when there is no honey-flow may be carried into the house, an additional super added, the colony screened and placed in a cool dark place for a few days, then it may be returned to its stand without robbing.

Preston Kinard, Jr.
Mississippi.

— V —

Feed enough in fall to carry the bees to the next flow, reserving some combs of honey either shallow or deep. In late spring those colonies short can be given two combs of honey in the late afternoon.

Those who use package bees this spring, will have to feed them to give them a good start, either morning or late afternoon. Leave the bees a small entrance which should not be enlarged until the bees are well established. Use a syrup, half water and half granulated sugar.

John J. Vargo, Illinois.

— V —

My choice way to feed bees is with a ten pound pail, with four or five small holes made by two penny nail and I use this feeder only in mild weather. I've also used combs filled with syrup using a tomato can with holes in the bottom as a filler to provide little streams of syrup which

enter the cells well. One or more of these combs may be used to the colony as needed.

I also use candy, twelve pounds of sugar to one quart of boiling water, simmer 15 minutes add a pinch of salt, a tablespoonful of cream of tartar. When partly cooled, stir vigorously and before too cool to pour, fill one or more fiber dishes. When the candy has set, turn these upside down on the frames, cover with gunny sacks, place an empty hive or super on and fill with forest leaves. A good plan for fall or winter.

J. A. Reed, Missouri.

— V —

Be sure the bees have ample stores at all times by leaving a super of honey. If you want to produce late brood feed syrup in October. I feed out-of-doors in troughs with sticks for floats, using 100 pounds of sugar to every 20 colonies. The syrup is made by boiling water and an equal amount of sugar.

Also feed in March to induce brood rearing. Five pounds per colony in outdoor feeders.

W. J. Crickard, W. Va.

— V —

I make feeders by punching holes in self-sealing lids of wide mouth mason jars. I usually solder the lids to their retaining rings and use a large rubber to keep the jar from leaking around the edges. One of these will just fit over the escape hole of the inner cover. Use an empty body to surround the feed jar. You can then see how much is taken down and can work the colony without a single bee in the way. This equipment is always at hand when needed.

However, I plan to keep honey enough on my bees to keep them going so I only feed them when starting colonies or when they absolutely need it.

J. Frederick Powers,
New York.

— V —

Sealed combs of honey should be given in the fall. If you need to use sugar syrup I pour the syrup in the top entrance which I use all year, and allow it to run down to the bottom board where the bees pick it up. This may be done any time. Others have tried bottom board feeding and have found it satisfactory.

Earl Emmons, Michigan.

— V —

I feed bees with a quart jar 2/3 full of sugar or 1/2 of honey and the addition of water. Dissolve the sugar first, screw the lid on tight. Put a hole about the size of an ice pick in the center. Remove three combs in the top super, place the bottle upside down in the space on a stick or block (Please turn to page 128)

NEW PLANTS

THOMAS Jefferson is quoted as having once said, "The greatest service which can be rendered any country is to add a useful plant to its culture." It is a bit surprising that with the large number of plant specialists in our public institutions so little attention is given to the search for new plants. By far the greater number of our plantmen are devoting their time to plants already in cultivation from 1000 to 5000 or more years. When the white man came to America he brought with him the plants which he had known in Europe and proceeded to plow under a rich and varied flora without stopping to investigate whether it might be of use to him.

Our plant explorers have been searching the world over for plants which are used in other countries while giving little thought to the possibility of finding new uses for plants already growing wild here. The recent investigation of the common milkweed is a good example of what might be done with many others if similar attention was given to finding out how they could be utilized. Milkweed was found to yield rubber, wax, fiber and several other useful products. The urgent demands of war turned public attention to its value as a source of floss for use in life preservers.

It is probable that we have hardly scratched the surface of the utilization of our plant materials. Results obtained by plant breeders in recent years indicate that revolutionary changes will come to agriculture when science turns its attention seriously to this field.

— V —

THE PURE FOOD LAW

HOW little we of the present day appreciate the protection offered to the beekeeper by the pure food law. Prior to its enactment the adulteration of honey was so general as to destroy all public confidence. The report of the Dairy Commissioner of New Jersey in 1888 gave the analysis of forty-two samples of honey. It was found that of thirty-one samples put up by bottlers only six were pure. Samples bought from beekeepers were all found to be pure. Now adulteration of honey is very rare and the housewife can depend upon the purity of the product she finds in any store. Without the protection of this law, commercial honey pro-

duction as now carried on, would hardly be possible since honey could be produced to compete with the glucose with which it was formerly so generally adulterated.

— V —

THE CATTLE FEEDERS' COMPLAINT

IN mild weather in winter and early spring there is much complaint on the part of cattle feeders because the bees visit their feed troughs in search of the ground feed. When there is no pollen to be found in the field the bees make use of anything within reach which seems to offer a means of meeting their urgent need. The meal which they find in the cattle troughs is probably of no value to them when they bring it to the hive but their presence disturbs the cattle and arouses the resentment of their owners.

Beekeepers in neighborhoods where ground feed is exposed in the open air for livestock feeding should use every precaution to avoid annoyance. Once the bees start visiting the feed yards it is difficult to stop them until fresh pollen becomes available. If the beekeeper puts out soybean flour or similar pollen supplement he will provide the bees with something useful in stimulating brood rearing and at the same time avoid trouble with his neighbors who are feeding cattle.

— V —

ESSENTIAL OIL IN TEXAS

THE Texas Experiment Station is investigating the possibility of commercial production of essential oil. Of the various plants which are under consideration one is a honey plant. Horsemint, (*Monarda fistulosa*) has a flower tube too deep for the bees to reach the nectar efficiently, although some other species of horsemint yield large crops of honey under Texas conditions. We would like to know whether the honey yielding species are of value for oil.

Mountain mint, (*Pycnanthemum albescent*) is a perennial native to east Texas. It has been found to yield an oil which compares favorably with imported oil of pennyroyal. Some of the mountain mints are very good sources of nectar and it is assumed that the same is true of this one.

Another plant from which oil has been distilled is the fragrant goldenrod, (*Solidago odora*). Although in some localities goldenrods do yield honey it seems doubtful whether any large yields are possible in Texas. Even though this plant should be extensively cultivated we have no reason to expect it to be important to the beekeeper.

In states to the north and east where goldenrod yields honey the beekeeper might find a substantial interest in the cultivation of this plant. It yields a high grade oil which looks promising and it is to be hoped that something may come of the investigation.

Thus far results have offered only enough encouragement to suggest that further investigation be made according to an article in a recent Chemurgic Digest.

— V —

GARDENS FOR WASTE PLACES

IN localities where there are strong garden clubs we find an occasional attempt to clean up vacant lots and waste places and plant flowering perennials to replace the weeds. Indications are that this movement will spread and offer a good opportunity for local beekeeping organizations to cooperate. Since many of the best ornamentals are good honey plants such improvement will result in better bee pasture.

One garden club is assigning each special area to some particular group for care. The Campfire Girls, the Boy Scouts, the young people's organizations in several churches, and others are working together to make a more beautiful city. Such organized effort will bring substantial results and the beekeepers should lend every encouragement to those who would replace coarse weeds with flowering plants.

— V —

WAR SHORTAGES

AS the war progresses shortages are likely to become more acute. The demand for replacements in the army is constantly reducing the available manpower. Help is an ever increasing problem and merchandise stocks are reduced to the point where many items can no longer be secured. We must adjust ourselves to the expectation of more and more of less and less.

NOSEMA AGAIN

By ROBERT KNUTSON

HAVING read the many articles and bulletins on Nosema disease and having corresponded with individuals in many parts of the United States besides spending quite a little time checking the disease with my own microscope, I am urged to point out some of the conclusions that have been reached.

First let us say that all bees have more or less Nosema infection except a very few in favored locations. The deciding factor is the degree of infection and the time of year it reaches its peak in your territory.

We cannot expect to pull a rabbit out of the hat and get entirely rid of the disease by some magic cure but rather we must remove those conditions which contribute to the perpetuation of the infection and are present to build it up to serious proportions at certain times.

The first consideration in the prevention of Nosema is your apiary site. Your yard should be located on well drained ground, sandy soil, not shaded and no water puddles should be allowed to stand anywhere in or near the yard. There should be some source of good clean water not too distant from the yard. Under these conditions the infection will gradually go down rather than build up.

The next consideration is your wintering conditions. Winter stores should be of the very best. Too often natural stores will develop some dysentery and this in turn will start the disease building up within the hive and if a long period of confinement is met your colony will dwindle down and die in late winter or early spring and it will ordinarily be blamed to poor wintering.

In cellar wintering your stores should be good enough so no spotting will show around the entrances while the bees are in the cellar. Your cellar should be dry enough and well enough ventilated to prevent condensation of moisture anywhere in the cellar and warm enough to allow any diseased bees to leave the hive and die on the floor as fast as they develop.

In outdoor wintering, packing should be arranged to allow any Nosema victims to leave the hive whenever the sun shines (your bees should be placed where they will get full benefit of the sun, not shaded in the least) even at low temperatures such as 5 degrees or 10 degrees above zero. Provisions should be made for moisture to pass out of the hive as

fast as it is liberated by the bees during the winter. We use a small bottom entrance with a 1 inch auger hole in top brood body. Don't worry about cold since if your bees are dry and have plenty of good quality feed above the cluster they will stand any degree of cold encountered anywhere in the United States without any bad effects.

To sum up the Nosema question the spreading of the disease just means there is a short circuit between the anus discharges of one diseased bee and the mouth of a healthy one and all we have to do is to break this circuit. This means an apiary site that will remain naturally sanitary during summer and we must provide conditions for a sanitary hive interior during winter.

Now for a word for the attention of package shippers and queen breeders. Since you do not have much winter and your bees may have a chance to fly anytime during the year, you must pay closer attention to the choice of apiary site, particularly your queen mating yards. Sunshine will readily kill Nosema spores and drying also helps so your yards should be located for good drainage, maximum sunshine and where no water can accumulate in or near the yard. If your queen yard is located on level ground of heavy clay soil and well shaded by large trees, such as we see in some of the breeders ads, you are certain to have a high percentage of infection in your queens and many dissatisfied customers.

Modern methods of shaking, shipping and installing packages seem to have a tendency to build up the infection within the package (if very much infection is present to start with) and if the queen becomes a victim, supersedure is the result soon after installation.

Your queen mating nucs should have young nurse bees to feed the queen at all times. By this I mean bees not over three weeks old.

The handling of Nosema is purely a question of prevention so we have endeavored to outline the conditions necessary to prevent its development to serious proportions. If you already have these conditions, you are lucky, but if you have the reverse your surplus production of honey can easily be reduced as much as 50 per cent and your chances of remaining in the bee business are just that much less. We hope this may help you.

Wisconsin.



LET'S GO!

These pictures were taken on Little River, just a few miles from the yards of John B. Sells, Foreman, Arkansas. He says "Plenty of holly and bass-wood in spring and also some good fishing and squirrel hunting." He proves the part about the fish. Most beekeepers have a yen for both hunting and fishing. And they can do either when they wish. One of our veteran Illinois deputies, Harry Canfield, says the fishing and hunting part of beekeeping is what makes him a die hard. Our Minnesota manager, W. F. Harter, can top the tall tales. He sets a small house down on the ice in winter. Puts in chairs, table, and grub; a stove for heat, plays cards with a buddy and fishes through a hole in the ice. Top that, you anglers!

— V —

BUY BONDS

How to Do It

CLEANING COMB FROM EXCLUDER

Cleaning excluders of comb is not a profitable source of wax. However, it facilitates the passage of bees through the excluder and certainly adds to their appearance. To clean an excluder, place it over an empty hive which is set in a telescope cover; cut the comb that may be on the excluder even with the wires or zinc with a hive tool, dump the wax into the hive below, and finish by brushing the remaining wax through with a wire brush with a 1 1/4 inch wire on a surface 1 inch by 5 inches. The brush is made for brushing carbon from cylinder heads and engine blocks. Although it is not necessary to work in a cold room, the wax is best handled when cold and brittle.

Ivan Whiting, Illinois.

— V —

HOOKS FOR LIFTING HIVES

As artificial and natural ice goes out of style, electric refrigerators come into use. The tools used by the ice men also go out of style. I purchased two pairs of ice tongs having handles long enough to permit their use while the operator stands erect. The tongs, when hooked under the beehive, afford a wonderful relief from stooping, forcing the fingers under the hive when it is desired to move colonies. One man working alone of course, can lift but one end of the hive and then the other. Two men together can readily lift the entire hive and carry it any desired distance without stooping or back breaking work.

Another set of these ice tongs fitted with a strap between handles to permit the use of one hand, enables one man to lift the hives to place the blocks under them when leveling. There are many useful utensils to be found around junk yards which, with a little ingenuity, can be put to very practical purposes in the bee yards.

J. H. Sturdevant,
Nebraska.

— V —

HAND TRUCK FOR BEES

Some time ago I bought a rubber-tired hand truck. It's fine for moving boxes and it is equally useful for moving bees, because it will go over the ground easily and won't shake the bees as bad as the old iron wheels do. Here eucalyptus is in full bloom, also fruit. It is like spring.

F. A. Korn, California.

SPIDERS

Spiders of the jumping variety often become a nuisance around beehives. I do not know that they are a major danger, but I do resent their intrusion into my yards. I find I can get rid of them by using my blowtorch. The spiders build nests under the rim of the metal hive lids, so I burn them out with the blow torch. The flame must be moved fast so as not to scorch the paint. I do not remove the lid.

Harry T. Starnes,
Indiana.

— V —

TRANSFERRING COMBS

When transferring brood combs into new frames, I prepare the frames by driving three 2 inch live staples in the top bar of each frame, spacing them about four inches apart to form suspending hooks that hold and support the combs in the frames. I use candle wicking to tie the combs in and find it much better than twine. It is more easily removed by the bees.

E. G. Kyte, Pennsylvania.

— V —

HONEY FOR RESPIRATORY TROUBLE

Mrs. Guild and I have cleared up sore throat, laryngitis and coughs with equal parts of honey, lemon juice and glycerine mixed together. At first attack, we use two teaspoonfuls every half hour for a few hours, then every hour. I have never found anything better for laryngitis.

Frank E. Guild,
New Hampshire.

— V —

KEEPING BEES OUT OF TROUSER LEGS

I secured two bicycle pant guards and put one on each ankle and that really keeps them out.

Douglas W. Decker,
Washington.

— V —

TO CLEAN A PAINT BRUSH

To paint beehives, the brush should be in good condition. Here is how I clean the paint brush, no matter how old and hard it may be. Soak the brush in lacquer thinner a short time. It will come out perfectly soft and pliable, like new. This is better than turpentine or any patented cleaner.

Harry T. Starnes,
Indiana.

THE ANSWER

(Continued from page 128)

1/2 inch high so the bees can get in the hole. I have fed all hours of the day with success and no robbing. [Be careful of disease when using honey—Ed.]

George E. Morris, Arizona.

— V —

The following may be used any time of the year. It is quick, simple and saves much time and worry. Level the hive. Take a new Boardman feeder, tack fine wire screen around the base leaving the wire high enough to allow a Mason jar to be inserted to hold the feed. Fold back the edges two or three times so the wire will stay close up to the hive when the feeder is in position. Leave the top open, fold the wire back same as the sides, put in a jar full of syrup, place in the feeder in the entrance of the hive on the left side, level the can and the feeder with a wedge, close entrance with entrance closer, leaving only a 3 inch opening in the center. Draw a paper sack, right size, over the jar and the job is done. In warm weather the bees use a quart of syrup in about a day and a half.

A. P. Burkholder, W. Va.

— V —

When bees are short of winter stores I have a method of feeding which I think is original with me. Provide a quantity of large paper sacks, such as sugar comes in, the type used by confectioners and ice cream manufacturers. You can get them for a small amount. Mark the amount to be fed each colony, usually 5 to 20 pounds. Beside each colony place an empty shallow super. Make your colony level. Get a quantity of excelsior or dry lawn clipping. Place heated bricks at each end of the super inside. Press one of the sacks inside of the super to form a basin. Place a few pieces of veneer therein and over that a bunch of excelsior. Then pour in the syrup and set the hive over onto the feeder. Do this in the evening. By morning the feed is in the combs and the feeding is done. Lift the hives back on their bottom boards. It will surprise you how quickly the syrup is taken up. I have even fed with snow on the ground, the ground frozen.

For stimulative feeding, such as nuclei, I pour syrup in an empty comb and place on the other side of a dummy and bees will carry it over and under and the queen will keep on laying no matter what the weather is. Contract the entrance.

Arnt Arneson, Wisconsin.

— V —

I prefer never to feed bees, but

when it is necessary I like to use a division board feeder in a full size colony, with spare combs in which the feed may be stored and ripened and kept to give to the nucleus or to the hive which will need it. This way avoids the robbing of small or weak colonies and the feed is in the combs ready for them any time.

Ralph Spragg, Ohio.

— V —

I use a Boardman feeder for two or three weeks after installing new packages. Otherwise I always leave my bees enough honey for themselves. New colonies get a half and half mixture of syrup and water, or frames of honey if I have them. I also feed a pollen substitute in the fall which the colonies may carry in and store before winter. My bees are wintered in sheltered spots out-of-doors. I do not pack them, yet I seldom lose any from wintering. More bees starve than freeze.

M. E. Genung, New York.

— V —

I feed when bees are light in stores in spring and for stimulation; by spraying syrup in comb with orchard hand sprayer; by inverted can feeder; and with open air feeder, formed by inverted can feeders turned upside down on slats supported by super shells. I prefer the spray.

Carl M. Teasley,
Tennessee.

— V —

QUESTION FOR NEXT MONTH

How to you keep swarming down to a minimum? From W. P. Kinard, Mississippi. Answer by the fifteenth, please.

— V —

SMALL SCALE QUEEN REARING

(Continued from page 124)

When transferring cells to the cell colony always avoid rough handling as a slight jar dislodges the larvae and acceptance is poor. After placing the frames on each side of the brood comb in the cell colony another light spraying of syrup will help put the bees in the right mood to accept and feed the cells. We assume the honey-flow is on. Weather conditions can interfere with the feeding of the cells and if this happens I recommend spraying the cell colony each day until the flow starts again, or until the cells are completely sealed.

After the fourth day the cell colony may be arranged so the queen may be returned to the original brood chamber, the screen removed, three to four combs of unsealed brood placed in the upper body where the sealed cells are being incubated. An excluder will be needed to keep the queen below in the brood chamber. No further attention is required until the tenth day, when the time is ripe for removing the cells.

American Honey Institute

Commercial State Bank Building, Madison 3, Wisconsin

Members of the Institute received the following pieces of literature on honey from the American Honey Institute within the last few months:

Old Favorite Honey Recipes—52 pages. (Revised and enlarged) Price \$7.00 per hundred, postpaid, for limited time.

Honey. A 12-page booklet on the nutritional value of honey, \$2.00 per hundred, postpaid.

Honey Specialties for Bakers—16 pages, 5 cents each, postpaid.

Honey to Start the Day Right. A 6-page folder—80 cents per hundred, postpaid.

Who's Who or the **Annual Directory** was also mailed to members. May we suggest that you order these books and leaflets as soon as you know the number you will need.

— V —

The March issue of *Vitality News* published by Products Control Department of General Mills, Inc., lists "Honey for Breakfast Week" in its Promotion Schedule.

It also features Hot Cross Buns (Honey Glazed). The hot-honey finish gives the buns the luscious glazed appearance of a luxury item without adding materially to the cost. This special glaze also permits the use of interest-arousing phrases such as "honey sweet," "delicious honey-glazed," and "honey-gold" in advertising of the item. And, of course, don't overlook the words nourishing, appetizing, entirely new and different in this connection.

Incidentally this use of honey is in line with the War Food Administration's recent policy of releasing larger quotas of honey to bakers. Extra quotas are being released to bakers who can use honey in new products, particularly in ways that are likely to continue after the war as distinguished from temporary use of honey purely as a sugar substitute."

— V —

The director of the Institute will give a radio broadcast on honey in April and one in May. She will talk on the American Honey Institute in Milwaukee on May 12. The program will be given for Home Economics graduates and faculty members of all colleges and universities in Wisconsin.

— V —

Extracts from letters—

"Old Favorite Honey Recipes is the best salesman we have ever had."

"Old Favorite Honey Recipes is the most beautiful and most practical

recipe book it has been my privilege to own."

"I never knew one could make such good things until I started to use Old Favorite Honey Recipes."

"Send immediately 100 of the folder 'Honey to Start the Day Right.' It is excellent."

"Please forward 12 additional copies of your booklet *Honey Specialties for Bakers*."

Major.....

"Your leaflets are the best honey-selling helps I ever came across."

— V —

OUR COVER PICTURE

Most readers will have noticed that so far our cover pictures for 1945 have been about permanent honey plants with a description in each issue, under the title, "Where the Honey Flows." We will break the continuity of this series of honey plant pictures for April for the Easter season and again December for Christmas.

The cover this month is from that master photographer, John Allen, of Lafayette, Indiana. The subject without saying, is ideal for the Easter season.

— V —

SPRING TROUBLE

A friend of mine grinds barley, oats, and corn quite fine for live stock. His house is a mile from the nearest known beekeeper. Nevertheless the chop bin was so full of bees that he was afraid to get near. This was March 9th. I am wondering if this does not prove that there is more than one substitute for pollen?

R. J. Mattingly,

Kansas.

[To be sure there must be, but substances vary in quality and in effectiveness. Bees will gather coal dust, saw dust, many substances which later when stored prove of little value in brood rearing. Experiments by both Dr. Farrar in Wisconsin on pollen supplements and by Professor Haydak, of the University of Minnesota, as reported in this issue, aims to use those things which will give the best results.—Ed.]

— V —

BUY BONDS



HOUSEKEEPERS, UNCONFINED

These bees took up housekeeping on the outside of a large tree. They seemed to be well satisfied. The combs were about two and a half feet long, with very little honey in them. With the help of another neighbor

beekeeper, they were taken down and made a fine colony of bees. They were in the backyard of T. E. Braniff, in Oklahoma City.

R. L. Blackwell,
Oklahoma.



STRAW SUITS THESE BEES

Mr. Tinsley, West of Scotland Agricultural College, and his assistant, W. Livingston, examine an old fashioned skep of bees; and a good, vigorous one. Rather pretty to look at. Some heather beekeepers

still use skeps commercially, taking them to the moors for the flow and claiming the heaviest for pressing. They say that the comb hive will not do so well. It seems decidedly ancient to the frame hive beekeeper.

All Around the Bee Yard

SEASONS

SPRING has burst upon us! Did you ever experience a spring like that? The word "burst" is about as suitable a one as could be used to describe the spring in the Mississippi Valley of Illinois. Winter was here just a few days ago. Then spring; almost over night. Sometimes things get slapped back for this kind of a performance, since unseasonably mild weather may be followed by the continuation of winter which often kills the fruit and most of the early bloom. One season at least, it destroyed clover. There was nothing for the bees until the fall crops. It required feeding thousands of pounds of sugar syrup just to keep the bees alive. However, that fall the crop was sufficiently abundant to return all of the feed and labor and cost of operation and leave some return. Honey prices were good; as I remember it, about 8½ cents a pound, which in those days was considered a fair price.

— V —

Charles Dadant had a saying in French: "Les saisons se suivent mais ne se ressemblent pas"; in English, "the seasons follow each other but are never alike." How true. Especially in beekeeping. Perhaps that is back of the fact that the majority of beekeepers, once having tasted the thrill of a honeyflow, never lose it entirely. Their confirmed optimism—no matter how disastrous the present year—the one to come will, by all measure, be that big crop year for which we have been waiting.

I once knew an agricultural prospector. That must be the correct name because it fits the case. He had control of many acres of land in eastern Oregon on which he grew wheat. Season followed season. He either made expenses or went broke or just came out even. But he talked forever enthusiastically about the year when he would get a big wheat crop, and then he would retire. One year soil, moisture, weather and growth were all in his favor. He actually did retire. He made as much money in one year as some people make in an entire life. Most wonderful to relate he stayed retired. Otherwise he might still be broke.

We know a beekeeper who lived in Nevada. During the last war he produced a large crop of honey, hundreds of tons, at a time when honey was bringing over 20 cents a

pound delivered in car lots. His crop brought him \$90,000, three times the returns from a single year of beekeeping than the wheat farmer obtained from his crop. The money went to his head. He didn't have sense enough to retire. No beekeeper can do that. He bought diamond rings, automobiles, traveled and then he was broke; back into the "dobe" on the desert, happy as a lord because he was at last, he said, "back home again."

— V —

So one season follows another, as Charles Dadant said, but they are never alike. One of the fascinations of keeping bees is the very uncertainty or shall we say the very certainty of change? There is nothing monotonous. There is always variety. There is always something to learn. There is always some new way to do. There is always the expectation of that golden return.

— V —

Now what will this season bring? Last season for us was bad. Someone may be able to solve the riddle of why in a time of war beekeepers seldom get large crops except in certain favorite localities. All of my life I have watched for that time when the price of honey would be high, my equipment would be capitalized and my crop would be large. I could do so many things then that I have never been able to do. Likely I would soon be home again, broke and happy. But that has never happened. Last year was the opposite. Even with high prices, we had floods, depredations, theft, extensive losses requiring excessive replacement costs and in every place where bees were kept, under our ownership, the crop was almost a complete failure. It will take at least two years to recover from the single season of 1944.

At least we hope that 1945 will be a pleasurable memory when it is over.

— V —

SALT WATER FOR BEES

Dr. Charles Zimmerli, of St. Louis recently asked about a formula for the amount of salt to put in water for bees. They are quite fond of salt water. Whether they need it or not, it certainly does increase their attention to water when the salt is added. We had no formula and so told Dr. Zimmerli. However, he replies that the formula is given by Professor Paddock, of Iowa, in state reports for 1937, which recommended water for package bees in orchards as follows: "The water was slightly salted at the rate of one tablespoonful of salt to one gallon of water."

Who's It?

THE young man for this month was obviously a sports enthusiast at one time. Enthusiasm still continued through his later years and extended to leadership in beekeeping. He has not been a beekeeper. He has been a research investigator, a leader in national organizations, has traveled extensively in the interest of the industry. His impressions on the beekeeping of his day will long be remembered as outstanding in its achievements.

Now for a few things that we have not said about this young man. If not born there, he lived for a time in the West. He was also an employee at one time of the United States Government. He is now a leader in one of the 48 states.

Watch out! It is going to be easy to guess wrong. Who is this young man? Send your answer before the 15th of the month. Those who guess correctly will have their subscription extended three months.

* * * *

Last Month Harris Braley Parks, Chief of the Division of Apiculture, Texas Agricultural Experiment Station, San Antonio, Texas.

What an avalanche! Many guessed right, but more guessed wrong, the ratio being about 2 to 1. Nevertheless, Dr. Parks, you have many friends scattered over the 48 states. J. G. Baxter, of Pickering, Ontario, has your full name. Since you are in Who's Who he may have obtained it there. Anyway it is correct—Harris Braley Parks.—Howard Weaver, Navasota, Texas, says "It is our own H. B. Parks, who, as far back as I can remember, has been secretary of our state organization."—V. O. Lee, Charleston, Arkansas, thinks that the Lone Star State Beekeepers will all

(Please turn to page 136)



Who's It? (Lower left)



H. B. Parks today.



O. W. Park, of Iowa, and H. B. Parks, of Texas.

Package Bees with Queens

We can accept a few more orders for May delivery.

Good overweight and safe delivery guaranteed.

2-lb. with queen ----- \$4.00

3-lb. with queen ----- 5.00

10% deposit books your order. Prices quoted on quantity lots.

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Subscription price, \$1.00 per year. Drop us a postal card today for your free copy and special introductory offer.

3-Banded Italian Bees & Queens

2-lb. pkg. of bees with queen ----- \$4.00

3-lb. pkg. of bees with queen ----- 5.00

Queens ----- 1.25

WRITE FOR DISCOUNT

J. P. CORONA

BOX 124 KENNER, LOUISIANA

Italian Bees and Queens for 1945 Delivery

2 Lb. and queen ----- \$4.00

3 Lb. and queen ----- 5.00

All orders booked on 20% deposit

EUGENE WALKER

397 Oregon St. Gridley, California

MIDDLE TENNESSEE APIARIES

Will be in the queen business at the same stand.

SEE PRICES IN NEXT ISSUE

J. B. TATE & SON

1029 No. 4th Street
NASHVILLE 7, TENNESSEE

PACKAGE BEES ITALIAN QUEENS

Queens ----- \$1.25

2-lb. packages ----- 3.90

3-lb. packages ----- 4.90

We guarantee full weight on all packages. Prompt shipment.

ELDRED J. COCO

HAMBURG, LOUISIANA

**When Writing Our Advertisers,
Please Mention the Bee Journal.**

Meetings and Events



E. M. Cole

E. M. Cole, well known beekeeper of Audubon, Iowa, died on March 13. For many years Cole has contributed an occasional article to the bee magazines and he was recognized as a careful student of bee behavior. Although he depended upon the bees for his livelihood he never kept such large numbers as are common in these days. Apparently he was more interested in the activities of the insects that the returns from the sale of hive products was of secondary importance.

Cole was unusually well informed concerning every phase of beekeeping and few men have been as familiar with beekeeping literature as he. In his later years he became interested in the wild flowers and spent much time in tramping over the countryside to become familiar with every species common to the region. In company with a friend who is a retired postal employee he scoured the country for a hundred miles around Audubon in search of rare plants.

For many years he has lived alone much of the time but he remained on friendly terms with the children of the neighborhood and was likely to be followed about by from one to a half dozen youngsters who sought his company.

In former years he was a regular attendant at the bee meetings and added much to the interest of the animated discussions of the open sessions. E. M. Cole was an unusual

personality who will be long remembered by those who knew him well.

— V —

Middlesex (Mass.) April 28

Saturday, April 28th at 7:00 P. M., the Middlesex Association will meet at 19 Everett St., Concord. Business includes election of officers and renewal of dues. Those unable to attend please send \$2.00 family membership to Mr. Chester A. Robinson, Treasurer, 105 Horace Road, Belmont, Massachusetts. Pot luck supper will be casserole dishes with bread, rolls and comb honey, pies, apples, cheese and pickles. Movies are on the program.

A. M. Southwick, Pres.

— V —



Dr. R. L. Parker to Bermuda

News has been received that Dr. R. L. Parker, Professor of Entomology and in charge of the beekeeping work in Kansas, has been granted a three months' leave of absence from Kansas State College to carry out a special assignment investigating injurious insects attacking the Bermuda cedar. He will be Consulting Entomologist with the Bermuda Board of Agriculture, Paget East, Bermuda. The insect causing the principal

damage is the juniper midge *Contarinia juniperina*, or a closely related species.

— V —

D. P. Green Honored by Allied Mills

D. P. Green, Green's Queen Apiary, Deland, Florida, has been chosen to be honored by Allied Mills, Inc., to participate in the Radio Program, VICTORY FARMERS, heard over about 30 stations in many parts of the country. Mr. Green was interviewed on this program March 16.

This is one of a series of programs on Tuesdays and Thursdays featuring interesting people and places, paying special tribute to American farmers and farm women performing outstanding service in producing food to win the war.

— V —

New Rochelle (N. Y.) Sunday, April 22.

New Rochelle association will hold its regular monthly meeting, Sunday, April 22, 2:30 P. M., at the home of Richard Stack, 94 Stuyvesant Avenue, Larchmont, N. Y. The Question Box will be featured, so bring your problems. Refreshments will be served.

A. M. Barnes,
Ass't. Sec'y.

— V —

Bronx County (N. Y.) April 8.

The Bronx Association will hold a regular monthly meeting April 8, 2:30 P. M., Sunday, at the home and apiary of Mr. L. Jones, 1727 Undercliff Ave. Demonstration if weather is satisfactory. Topic for discussion "Package Bees, and Their Introduction." Bring your questions. Refreshments will be served.

Harry Newman,
Secretary.

— V —

Federation News Letter

The first copy of the Federation news letter, official organ of the National Federation of State Beekeepers' Associations has been received. It is edited by the Secretary, V. G. Milum, 104 Vivarium Building, Champaign, Illinois, and at first covers the initial information on the membership, offices, committees and other features of the new organization. This is the beekeepers' chance to get behind a real national organization. Those interested in membership are invited to correspond with the secretary-treasurer, at the address given.

PACKAGE BEES AND QUEENS for SPRING DELIVERY

We still have open dates, so for a bigger honey crop the coming season get our line bred Italians, noted for their prolificness, livability and vigorosity. Health certificate and satisfaction guaranteed. FULLY BOOKED FOR APRIL.

	1-5	6-25	26 up	
2-Lb. package	\$4.00	\$3.90	\$3.75	QUEENS AT
3-Lb. package	4.85	4.65	4.50	\$1.10
4-Lb. package	5.85	5.65	5.50	
5-Lb. package	6.80	6.60	6.45	

Terms—Twenty per cent to book order, balance at shipping date

B. J. Bordelon Apiaries : Moreauville, La.



Extra Care Fast Service • **High Producers Prolific-Gentle**

WE are now conservatively booked; but with average to good weather, we will have more bees, constantly, than we can possibly book in advance. If you need bees, keep in touch with us.

OUR stock has been chosen for prolificness, high production, gentleness, and appearance. There are four express and mail trains daily to give you fast service.

FOR extra safety in shipping, we use cages with more screen wire; we provide more syrup to guard against any possible delays; we take every precaution to make sure that your bees reach you in perfect condition.

1945 PRICES

Lot	Queens	2-Lbs.	3-Lbs.	4-Lbs.	5-Lbs.
1-5	\$1.35	\$4.25	\$5.25	\$6.25	\$7.25
5-15	1.30	4.15	5.15	6.15	7.15
15-25	1.20	4.00	5.00	6.00	7.00
25-up	1.15	3.90	4.90	5.90	6.90

Above package prices include queen. Queenless packages, subtract \$1.15 from price of package with queen. All queens are airmail, postpaid, but package bees are F. O. B. shipping point and are Express collect. It is preferable to ship package bees by Railway Express, however, they can be mailed and in that event, customers should include postage.

Terms: Small orders, cash in full. Large orders, 20 per cent deposit, balance to be received two weeks before shipping date. U. S. funds.

The Daniels Apiaries : : Picayune, Miss.

Package Bees—Carniolan Queens
EPHARDT'S HONEY FARMS

2-lb. pkgs. with queen \$4.00 ea. F. O. B.
3-lb. pkgs. with queen \$5.00 ea. F. O. B.
PLAUCHEVILLE, LOUISIANA

Better Bred Queens - 3-Banded Italians

It is not what we say in this ad that counts. It is the service and quality we give you that counts. We have open dates between the 1st and 10th of April. More later if weather permits.

	Queens	2-Lb.	3-Lb.	4-Lb.	5-Lb.
1-24	\$1.50	\$4.25	\$5.35	\$6.45	\$7.55
25-99	1.40	4.00	5.05	6.10	7.15

CALVERT APIARIES
CALVERT, ALABAMA

Sunny South Apiaries

Bunkie, La. : I. CLARK, Prop.

5,000 Packages of Bees, ITALIANS
10,000 Queens, available for April
and May shipments

2 lbs. with Queen	. . .	\$4.00
3 lbs. with Queen	. . .	5.00
Extra Queens	. . .	1.25

Buy WAR BONDS and Hold Them

DIXIELAND'S

LEATHER-COLORED ITALIANS, PACKAGE BEES AND QUEENS
FOR SHIPMENT AFTER MAY 12TH
ALSO PACKAGE BEES AND QUEENS FOR JUNE DELIVERY

	Queens	2-Lb. Pkg.	3-Lb. Pkg.	4-Lb. Pkg.
1-24	\$1.25	\$4.00	\$5.10	\$6.20
25-99	1.15	3.75	4.80	5.85
100-up	1.05	3.50	4.50	5.50

DIXIELAND APIARIES, Greenville, Ala.

Gaspard's Quality Italian Queens and Package Bees

We are now booking orders for Spring 1945. Only 20% with order, balance at shipping time.

Prices as follows:

2-Lb. package with queens	\$3.75
3-Lb. package with queens	4.75
4-Lb. package with queens	5.75

Comb packages with one frame of brood add \$1.50 per package

J. L. GASPARD

Hessmer, Louisiana

To assure yourself of obtaining the best of supplies, read the ads of A-B-J—when writing to them, mention A-B-J

FRANKLIN'S

"FROM THE DEEP SOUTH"

ITALIAN BEES AND QUEENS

2-Lb. Pkg. with Queen \$4.00

3-Lb. Pkg. with Queen 5.00

Queens, each 1.25

J. D. FRANKLIN

2815 Camus Court, New Orleans, La.

QUEENS QUEENS QUEENS

Can accept a few orders for delivery May 15th to June 30th.

W. E. CLOUD

Muir Road, Route 1
YUBA CITY, CALIFORNIA

Bee Supplies by Mail

Save time—Save travel—Buy close by
Lewis-Dadant Supplies in stock.
43½¢ in trade for your beeswax.

SWISHER'S MARKET

P. O. Box 806 Springfield, Ohio

PACKAGE BEES

Italian Queens

	1-24	25-49	50 up
2-Lb.	\$4.00	\$3.85	\$3.75
3-Lb.	4.85	4.65	4.50

No extra queens available. No C.O.D.

Booked to capacity until May 10th

We guarantee full weights on all packages and prompt shipment.

Oscar Arnouville

HAMBURG, LOUISIANA

GLEANINGS IN BEE CULTURE

FEATURE ARTICLES—NEWS ITEMS
MONTHLY TALKS TO BEEKEEPERS

Subscription Rate

1 year, \$1.00; 2 years, \$1.50; 3 years \$2.00

In United States and Canada

THE A. I. ROOT CO.

MEDINA, OHIO

QUEENS QUEENS

LEATHER COLORED ITALIANS

An unlimited number for delivery after May 15th.

Am sold out of packages and queens until the above date. Thanks,

For the best, try

Gold Flat Apiaries

NEVADA CITY, CALIFORNIA

For Better Beekeeping

Use

**DADANT'S
FOUNDATION**

FIRST CHOICE OF EXPERT BEEKEEPERS

HOW TO FEED SULFATHIAZOLE TO BEES

(Continued from page 118)

the bees and please report it to the Journal just as soon as possible. Such information will be helpful. The long finger of suspicion, in the improvement of the bees, points directly to infection with Nosema. We want to know if Nosema is universally present in colonies that have American foulbrood.

Several want to know if honey can be substituted for sugar. Yes, I wintered two colonies on treated honey to test the ability of the bees to live every day on a diet of sulfathiazole. There were no ill effects. I would dilute the honey for feeding in the spring, dissolve a sulfathiazole tablet in water, heat the honey to about 140° then add water to any solution you wish. Some suggest twenty-five per cent, some two-thirds. Gauge that by the amount of honey you have and what you want in the way of feed. You will have to do a lot of mixing to keep the water from coming to the top.

Some one suggests that brewers' yeast be used instead of soybean flour. I do not know what would happen to the yeast in the presence of the sulfa drug. Of course, complete supplement will not ferment where sulfathiazole is used. [Probably the use of the yeast with the soybean flour according to Dr. Haydak's formula would be all right with the sulfathiazole added.—Ed.]

Dr. Haseman and I are undecided in this whole experiment whether we have a bear by the tail or whether the bear has us by the tail. We have proof for everything we have done. We have done things we would not want those who live from their bees to do. Last summer I treated two colonies until they were clean, then put into each a comb of the rottenest kind of foulbrood, gave each colony two half gallon jars of treated syrup and the bees cleaned out the comb and they are in my yard today as clean as a ribbon.

However, that is pure dynamite. Treat your bees, but don't play with that kind of stuff.

Missouri.

Choose Labels Wisely
YOU CAN'T GO WRONG
WITH A-B-J LABELS
They sell honey and are priced
right
Send for Complete Catalog
American Bee Journal
HAMILTON, ILLINOIS

WHO'S IT?

(Continued from page 131)

have their subscriptions to American Bee Journal set up three months on this one. They will think right out loud and say "it is H. B. Parks."—I. C. Eppright, of Austin, calls him "Our beloved."—Thelma Burleson, publicly thanks you Dr. Parks for "a most tangible demonstration of friendship, as far as I am concerned, in the help extended me on my Masters Thesis at the University of Texas, 'The Origin and Development of the Bee Industry in Texas.' He is a generous, cultured gentleman."—A good try from Leo. Wardell, Palestine, Texas, "I am sure it is Dr. Parks although we have never met him."—Eldon Martin, who goes strong on our hints, says, "I don't know much about H. B. Parks and what his work has been in the development of the [resistant] strain of bees but the other hints fit pretty well. So Parks is my guess, hit or miss."—Albert J. Braun, of Naples, N. Y., says too, "I never saw him, but the description fits."—Mrs. Roy Weaver is just as sure as her husband that it is Parks. (Why shouldn't she

be?) And Guy Polley claims that "you have been sticking me the last few times but I've got it now, this is H. B. Parks, of San Antonio."—T. B. Cantrell, writing from Gatesville, Texas, says, "I am a long way from home but I am trying again for another free three months' subscription. My guess is H. B. Parks."

Runners up were F. B. Paddock, Iowa State College; Frank C. Pellett and Dr. O. W. Park.

— V —

CANADA REQUIRES FOOD CERTIFICATE

To make sure that shipment of bees and queens reach the consignee in Canada without delay it is advised that all shippers make sure that a food certificate be attached to every shipment. State inspection certificate is not sufficient. The regulation is that bees, in combless packages, must be accompanied by "a declaration, signed by the shipper, that the food supplied in the packages is free from disease." Attention to this will be greatly appreciated.

C. B. Gooderham,
Dominion Apiarist.

PACKAGE BEES—ITALIAN QUEENS

Light, 3-Banded Italians reared from queens tested for heavy honey producing. Long life, good winter resistant and gentle. Stock I have been breeding from since 1926 and has made me continuous good customers. Can also furnish queens reared direct from government queen resistant to disease. Also have access to thousands of colonies of Association Members, for large orders, free from disease. War veterans preference and 5 per cent discount.

On all checks under \$100 add exchange fees of 10 cents. Over \$100 add 20 cents. No exchange on P. O. money orders.

Queens of either stock	\$1.25
Bees, 2-Lb. with Queen	3.90
Bees, 3-Lb. with Queen	4.90
Per extra lb.	1.10

HOMER W. RICHARD

Route 3, Box 252A

Phone 1370

El Dorado, Arkansas

Mr. Honey Producer

Join a progressive cooperative now and safeguard your future market. We need the honey at ceiling prices. You need us to safeguard the time when selling is hard. Join now.

For particulars write

Illinois Honey Producers Assn.
Mt. Sterling, Illinois

ROOT QUALITY BEE SUPPLIES

GLASS AND TIN CONTAINERS
HONEY AND BEESWAX WANTED

M. J. BECK CO.

Successor to M. H. HUNT & SON
510 N. Cedar St., Lansing, Mich.

SPRING IS HERE!

Again we are hitting the line with all we have. Our force is small, but we are determined to win. In spite of war's casualty in our ranks we are trying to carry on as we know Nels would have us do, however hard it is.

We have been swamped with orders, and we do regret some of them had to be returned because of dates being full. Off to a splendid and early start in queen-rearing, and package colonies responding to the favorable weather, sparked by young queens and ample stores or feeding, we may be in position to take a few more May orders for packages. Output of queens completely taken until about June 1st.

JENSEN'S APIARIES :: Macon, Miss.

THE HOME OF "MAGNOLIA STATE" STRAIN ITALIANS

RED STICK APIARIES & CO. PACKAGE BEES — QUEENS

Twenty-four years as commercial queen breeders. Oldest combless package bee shippers in Louisiana. Special priority to returned veterans with empty equipment.

ITALIAN STOCK—RESISTANT STOCK—YOUR CHOICE

Quantity	Queens	2-Lbs.	3-Lbs.
1-24	\$1.25	\$4.00	\$5.00
25-99	1.15	3.75	4.80

Terms: Remittance with order.

RED STICK APIARIES & CO.

Main Office, 125 Lessard St., Donaldsonville, Louisiana, Telegraph, Western Union

Honey Getting

THE BLUE BOOK OF BEEKEEPING

By E. L. Sechrist

Something brand new in bee books, the principles of getting a maximum crop, at minimum expense. E. L. Sechrist was beekeeping specialist for the U. S. D. A; also a commercial beekeeper in the U. S. and in the tropics.

Limited edition at low price—\$1.50 postpaid. With two year subscription to ABJ, \$3.00

American Bee Journal

HAMILTON, ILLINOIS

"HONEY GIRL" ITALIAN PACKAGE BEES

25 years, selective breeding assures you, quality stock. 25 years experience assures you prompt, efficient service. There is no substitute for quality and service at the right price. Write us your anticipated requirements and approximate shipping date, and we will advise what we can do.

St. Romain's "Honey Girl" Apiaries
Moreauville, La.

ITALIAN PACKAGE BEES & QUEENS

On the same old Basis—QUALITY, SERVICE, SATISFACTION

2-lb. bees with queen	\$3.95
3-lb. bees with queen	4.95
4-lb. bees with queen	5.90

Queenless packages deduct \$1.00

Comb packages with one frame of brood, add \$1.45

E. J. BORDELON APIARIES

BOX 33

MOREAUVILLE, LA.

Italian Package Bees and Queens

We hope to accept more orders if conditions permit during the current month and May. Refer to previous ads for prices.

Order your summer and fall queens now while dates are available. We appreciate your good patronage and sorry that so many orders could not be handled this spring.

BESSONET BEE COMPANY
Donaldsonville, Louisiana

Package Bees For 1945

WITH QUEENS OF HIGHEST QUALITY.
PLACE YOUR ORDER NOW.

	1 to 23	24 to 98	99 up
2-lb. packages with queens	\$3.85	\$3.70	\$3.50
3-lb. packages with queens	4.85	4.70	4.50
For queenless pkgs., deduct	1.25	1.20	1.15

Save us time and delay by ordering your packages in multiples of three. Terms. \$1.00 per package with order, balance before shipping date. Live delivery and satisfaction guaranteed.

JOHN C. HOGG
TIFTON, GEORGIA



Write for 1945 price list. We now have many items that have been short for some time. Prices remain steady except on bees. All stocks are low, so order early.

GLASS We again have a large stock of **ECONOMY** style glass jars ready for quick shipment

Carton of 24	1 Lb.	12 Lbs.	70c per case
Carton of 12	2 Lb.	9 Lbs.	42c per case
Carton of 6	5 Lb.	10 Lbs.	50c per case
Twelve cartons of 5 Lb.			\$5.00 per lot
Twenty-four cartons of 5 Lb.			\$9.95 per lot
Carton of 16 5-gal Cans			\$5.40

WALTER T. KELLEY CO. : Paducah, Kentucky

CROP AND MARKET REPORT

Compiled by M. G. DADANT

Winter Loss

Our reports came in just a little soon to give a good idea of what the final winter loss would be; at least the southern half of the country has no excessive amount of winter loss and perhaps a little lower than average. Even the reports coming in from northern sections indicate only an average loss. However, the long confinement of the bees and the possibility of rather underpar stores gathered from a variety of sources, leads one to the possibility of bees being weaker than has been anticipated and possibility of spring dwindling looms up. However, where colonies were built up with good stores last fall, the long confinement does not seem to have made a great deal of difference and the colonies are coming along. Weak colonies, as usual, do appear and loss indicated from reports, should run from five to ten per cent average with the possibility of increased amount as the spring progresses, particularly if we have a cold disagreeable spring.

Colony Condition

As stated above, colonies seem to be in average condition. In the southern half of the country, they are perhaps a little ahead of time except in a few local areas. In the northern sections, the warm weather during mid-March allowed some examination with colonies apparently about in average condition.

California perhaps does not appear as rosy as a month ago. Colonies were advancing rapidly and then cool spells of weather came which has retarded possibility of advancing with the season. It is our opinion that on March 20, colonies in California were not in a particularly optimistic condition to get the earlier crops of orange at least.

Moisture Conditions

We have almost universal reports that the moisture conditions are good to excellent. In fact, many say that we are going into the spring season with better conditions than we have had in many years and this report extends practically all over the country, except that in the inter-mountain, perhaps the snowfall has not been as heavy as might be required to supply sufficient water for all irrigation purposes during the coming summer.

The weather has been satisfactory in the package shipping areas for a good build up of colonies and some instances package shippers anticipate that they will be able to exceed last year's volume production unless weather conditions during the shipping season are adverse. All in all, moisture conditions are what we would call excellent throughout all except few of the areas. California does not have excessive moisture but probably sufficient to carry the honey plants along if average or better than average moisture conditions prevail from now on. The colony condition there is probably the worst stumbling block although even there in some sections, the colonies are in average condition. We would estimate that condition. We would estimate that are better than average.

Honey Plants

Again the report is similar to moisture report and that is that conditions are at least normal and in many sections, better than normal. This report, of course, covers all the natural honey plants and is untrue of the planted acreages as sweet clover undoubtedly has no greater acreage than last year and perhaps in many instances, much less. However, the sweet clover plants such as there are, are in excellent condition and the little Dutch white clover gives a promise throughout the whole northern sections of the country.

The Southeast is looking forward to better than average conditions and much better than last year.

In the Inter-mountain sections and Plain states, conditions are, at least, normal and with fair moisture, should be desirable.

Summary

All in all, we believe that the plant conditions and moisture are above normal. Winter loss and colony conditions may be average but we anticipate a heavier loss than first reports indicate and the possibility that many more packages will be needed than the northern beekeepers have counted upon. It looks like a "spring dwindling" year.

HONEY WANTED Carloads or Less
HIGHEST PRICES PAID
LEWIS A. KONCES CO.
NORTH ABINGTON, MASS.

One Can or a Carload—What have you? Mail your offerings to us.—Prompt action. Cash on delivery.
JEWETT & SHERMAN CO.
Lisbon Rd. & Ervine Ave. 1204 W. 12th St.
Cleveland, 4, Ohio Kansas City, Mo.

HONEY WANTED

Cars and less than cars
Mail Samples

O. W. AEPPLER CO., Oconomowoc, Wisconsin

KOEHNEN'S
Package Bees and Queens
For Quality and Service
KOEHNEN'S APIARIES
GLENN, CALIFORNIA

PRE-WAR SERVICE & QUALITY

Package bees headed by our f mous queens. May we have the privilege of adding your name on our list of satisfied customers.

	Queen	2-Lb. Pkg.	3-Lb. Pkg.
1-24	\$1.25	\$4.00	\$5.10
25-99	1.15	3.75	4.80
100-up	1.05	3.50	4.50

Send us your queen orders.

Apiaries accredited and certified by the Alabama Dept. of Agriculture.

O. K. ANDERSON & SON
COFFEE SPRINGS, ALABAMA

CANADIAN BEE JOURNAL

Canadian beekeepers too have wartime problems. If you are interested in bee activities "North of the Border," send us your subscription NOW. We will see that you receive each monthly copy regularly.

Each issue contains timely articles of value to beekeepers everywhere, and News and Views from Coast to Coast.

Subscription price, \$1.25 per year in U. S. A.

CANADIAN BEE JOURNAL
OSHAWA, ONTARIO

Caucasian and Italian

PACKAGE BEES WITH QUEENS

2-Lb. package and queen — \$4.00 each

3-Lb. package and queen — 5.00 each

Over a quarter of a century in the same place, in the same business, is my record.

My motto: I will expect to do business with you again.

H. E. GRAHAM
CAMERON, TEXAS

We Can Book a Few More Orders

FOR 1945

April 20 to May 20 at prevailing prices.

THE VICTOR APIARIES
UVALDE, TEXAS

The GOAT WORLD

OFFICIAL ORGAN OF THE
American Milk Goat Record Association

Oldest and largest Milk Goat magazine published. Broadcast circulation. Articles by best authorities. Subscription rate: one year \$2.00; three years \$4.00; five years \$6.00.

Sample copy 20 cents

Address:

The Goat World, Roanoke, Va.
1119 WILLIAMSON ROAD

• THE MARKET PLACE •

BEES AND QUEENS

FOR SALE—Three pounds certified package bees with queens \$4.25 each, April 20th to June 1st. Todd Apiaries Colquitt, Ga.

PACKAGE BEES, young thrifty Italians. Health certificate furnished. Tanner Bee Company, Laurel, Mississippi.

SELECT ITALIAN QUEENS. If you are particular about queens, I ship the kind of queens you want. "No fooling." \$1.25 each. J. H. McCartney, Piru, Calif.

CAN BOOK ORDERS for two hundred packages, June 1st to 10th. N. S. Gladish, 3315 Hobbs Rd., Nashville 5, Tenn.

ITALIAN PACKAGE BEES AND QUEENS, April and May delivery. 2 lb. pkg., each \$4.00; 3 lb. pkg., each \$5.00; over 50, \$3.60 and \$4.50. M. E. Baker, Rt. 1, Gridley, California.

FOR SALE—Two and three frame nuclei for last of April and May deliveries. Am booked up until April 20; can supply several hundred in May. Also four frame nuclei, two in a ten frame hive body. Two frame nuclei with queen \$4.50 each; three frame nuclei with queen \$5.50 each; four frame, two in hive body \$6.00. Safe arrival and perfect satisfaction guaranteed. Wm. Atchley, 132 Campus Ave., UPLAND, CALIFORNIA

GOLDEN QUEENS finest quality. Fine workers. Untested \$1.25 any number. Carolina Bee Farm, W. O. Curtis, Mgr. Graham, North Carolina.

QUEENS from prolific Italian breeding stock selected for honey production and not for color alone. 1 to 24, \$1.25; 25 to 99, \$1.10; 100 up, \$1.00. Allen J. Airhart, 608 Cottage Lane, Lake Charles, Louisiana.

PACKAGE BEES with young laying Caucasian queens. 2 pound package \$3.80; 3 pound \$4.80. See us for queens after May 31, \$1.00 each. Formerly Miller Bros, now write Miller and Evans, Three Rivers, Texas, Rt. 1.

OLD RELIABLE THREE BAND ITALIAN QUEENS. Bred for production. Untested \$1.15 each. Quantity prices on request. H. C. White Apiaries, SANDIA, TEXAS.

GREEN'S PROFIT PRODUCING QUEENS Will please you as they have pleased hundreds of others. Famous the country over. Where could you do better. Price \$1.00 each. Booked up on package orders. D. P. Green, Rt. 2, Deland, Florida.

NOTICE—Cannot accept any more orders for package bees and queens until after June 1st. Tillery Brothers, Greenville, Alabama.

THANKS to our many friends, completely sold out for April and May. Now booking for June delivery at \$9.00 per dozen. Walter D. Leverette, P. O. Box 364, Fort Pierce, Florida.

THREE BANDED ITALIAN queens of finest quality. 1 to 25, \$1.25; 25 to 100, \$1.20; 100 up, \$1.10 each. Satisfaction guaranteed. Health certificate with every order. Alamance Bee Co., Geo. E. Curtis, Mgr. Graham, N. C.

PACKAGE BEES, QUEENS, Italians. Circular free. Crenshaw County Apiaries, Rutledge, Alabama.

We are completely sold out of our CAUCASIAN QUEENS and BEES until July first 1945. For their splendid patronage we wish to thank our many friends. REMEMBER . . . order early. T. L. Nicolayson, Salida, California.

HONEY AND BEESWAX WANTED

WE PAY CEILING PRICES for wax, and remit the day the wax is received. Your

wax made into medium brood foundation at 12c per lb. The Hawley Honey Co., Iola, Kansas.

HONEY AND BEESWAX. HIGHEST PRICES PAID. MAIL SAMPLES, ADVISE QUANTITY. BRYANT AND COOKINHAM, LOS ANGELES, CALIFORNIA.

WANTED—Extracted honey, white or light amber, in 60's. Ed. Heldt, 1004 W. Washington St., Bloomington, Illinois.

CLOVER HONEY WANTED—Send sample and price. J. Wolosevich, 6315 South Damen Ave., Chicago, Illinois.

HONEY WANTED—Small or large lots. Send sample and amount. Rocke Apiaries, Eureka, Illinois.

HONEY WANTED—All grades and varieties. Highest cash prices paid. Mail samples. State quantity. HAMILTON & COMPANY, 1360 Produce Street, Los Angeles, California.

CASH FOR YOUR WAX the day received. Write for quotations and shipping tags. Walter T. Kelley Co., Paducah, Kentucky.

ALL GRADES extracted honey wanted. Bee supplies and honey containers for sale. Prairie View Honey Co., 12243 12th Street, Detroit, Michigan.

CLOVER HONEY WANTED—Small or large lots. Send sample, state quantity, and how packed. Ellsworth A. Meineke, Arlington Heights, Illinois.

HONEY FOR SALE

39 cans medium amber fall honey, good flavor, at ceiling price. A. J. Wilson, Hammond, New York.

HONEY FOR SALE—We buy and sell all kinds, any quantity. H. & S. Honey & Wax Co., Inc., 265-267 Greenwich St., New York.

SUPPLIES

A new combined CONTROLLABLE FEEDER AND SWARM CONTROL. Useful also as inner cover, bee escape and robbing preventive board in queenlessness and drying wet combs; as winter top entrance and pollen feeder. Sample with directions, postpaid \$1.95; 5 (not assembled nor prepaid) for \$8.00. NICOLLET COUNTY NURSERY, St. Peter, Minn.

COLLECT your pollen with simple TRAPS that will fit any size hive. Conveniently installed and operated. Satisfaction after fair trial. Instructions for care and feeding pollen and flour cakes. 1, \$1.00; 5, \$3.50 third zone, 10c extra beyond third. C. W. Schaefer, Middleton, Wisconsin.

SAVE ON LEWIS-DADANT BEE SUPPLIES AND HONEY CONTAINERS IN MINNEAPOLIS. Send list of needed supplies for quotations. Prompt shipment made from large stock. Top prices paid for honey and beeswax in cash or trade. HONEY SALES COMPANY, 1806-08 No. Washington Ave., MINNEAPOLIS 11, MINNESOTA.

SOY FLOUR for pollen substitute. "Special-X" Soy Flour (Expeller Method). 5 pounds \$1.00, postpaid; 10 pounds \$1.75, postpaid. 25c additional west of Rocky Mountains. Remit with order. Spencer Kellogg and Sons, Inc., Decatur 80, Illinois.

SOMETHING NEW — INSTANT NINE FRAME SPACERS. Fast, accurate, indispensable. Fat combs; easy uncapping; more honey. Set does all supers. \$1.50, postpaid. George Leys, 48 Drake Ave., New Rochelle, New York.

PORTER BEE ESCAPES are fast, reliable, labor savers. R & E. C. Porter, Lewistown, Illinois.

YOUR WAX WORKED into high quality medium brood foundation for 16c pound; 100 pounds \$12.00. Medium brood foundation for sale at 70c per pound not prepaid. Fred Peterson, Alden, Iowa.

BEEKEEPER'S HOIST—Inspection easy. \$25.00. spring delivery. Frt. prepaid in States. Bee Turner, Corning, Iowa.

LEWIS BEE SUPPLIES—Dadant's Crimp Wired Foundation. Prompt shipment from large stock. Simeon B. Beiler, Authorized Distributor, Intercourse, Pa.

POLLEN TRAPS approved by Dr. Farrar. Three sizes, \$2.50 each postpaid. Geo. De Koeper, Baraboo, Wisconsin.

WRITE FOR CATALOGUE. Quality bee supplies at factory prices. Prompt shipment. Satisfaction guaranteed. The Hubbard Apiaries, Manufacturers of Beekeepers' Supplies, Onsted, Michigan.

LARGE CASH SAVINGS can be made by letting us work your wax into either wired or plain foundation. Large independent factory manufacturing a complete line of bee supplies including extractors, etc. Selling direct saves you the agent's profit. Quick shipment from large stock. Large free catalogue explains everything. Walter T. Kelley Co., Paducah, Kentucky.

FOR SALE

FOR SALE—2000 sheets of Dadant Wired Foundation 8 1/2 x 16 1/4. E. J. Cope, Attleboro, Mass.

CLEAN 10 frame hives, supers, extractor and tank. 2110 Williams, Burlington, Iowa.

JUNIOR BRAND capping melter 20 frame simplicity extractor, honey tanks, several hundred zinc queen excluders. John Tidswell, 2711 No. 63 St., Omaha, Nebraska.

FOR SALE—Superior extractor, 8 frame, Brand wax melter large size. J. R. Light, Minburn, Iowa.

FOR SALE OR WILL LEASE—200 colonies of bees in 10 frame equipment; 45 frame extractor; 300 gallon tank; honey pump and other equipment, much of it new. Walter McKinley, George, Iowa.

125 COLONIES, 10 frame, double and triple bodies. Plenty of food. Foulbrood resistant stock. H. B. Hale, Chillicothe, Ill.

13 COLONIES BEES. Plenty extra honey, hives, supers, etc., including full extracting equipment. G. F. Baker, Rt. No. 4, Dixon, Illinois.

FOR SALE—My entire bee business, on account of failing health. J. J. Wilder Waycross, Georgia.

SIMPLICITY 45 frame, in A1 condition. Used 3 years. Willis H. Closs, York, N. Y.

FOR QUICK SALE—Ten Lewis standard used hives and supers, metal tops. Two new complete hives. Other extra supplies. All for \$30.00. Marie Wendlandt, Steele, North Dakota.

FOR SALE—200 eight frame hives of bees, 2 supers each. No disease. Caucasian stock. Spring delivery. Nealey Honey Co., Aberdeen, Idaho.

FOR SALE—500 10-frame comb honey supers for 4 1/4 x 1 1/2 sections, new, in crates of 5, slightly shopworn, \$3.50 per crate F. O. B. Windom, Minnesota. B. I. Evans.

FARMS WANTED

WANTED to hear from owner of farm or unimproved land for sale. Wm. Hawley, Baldwin, Wisconsin.

WANTED

WANT few acres with buildings or small farm. Electric line. Hard road. State price. Write Box 454, Chicago 90, Illinois.

WANTED—Dadant's super combs, dark preferred. E. Lund, Vining, Minnesota.

WANTED TO BUY—Colonies of bees. State price. Thomas McDermott, 123 No. 11th Street, Newark 7, N. J.

WANTED—Fifty Rauchfuss queen nurseries. E. G. Carr, Pennington, N. J.

POSITIONS AND HELP WANTED

WANTED—To hear from married or single man interested in apary work. Top wages paid. Chas. L. Phillips, Fromberg, Montana.

WANTED—Sober active helper, or manager, looking for a future. Write full particulars. Syverud, Chandler, Minnesota.

WANTED—A beekeeping position. Experienced in extracted honey production in several states. J. T. Mason, Route 3, Maloney Road, Knoxville, Tennessee.

HELP WANTED—An experienced man to work, year round, in apary. Must have good habits—drinkers need not apply! J. W. Reitz & Bros., Sun-Glo Honey, Rt. No. 1, Summerfield, Florida.

HELPER WANTED for my Minnesota apiaries. State age, experience, wages, etc. expected. E. E. Salge, Weslaco, Texas.

SEEDS AND TREES

FOR SALE—Sainfoin seed 1944 crop grown without irrigation. 75c per pound up to 10 lbs.; 55c per pound in lots over 10 pounds. R. W. Brimhall, Pleasant Grove, Utah.

BY EXPRESS COLLECT—American Basswood trees 4-5 ft. at \$1.00; 5-6 ft., \$1.50; 6-8 ft., \$2.00; 3-4 ft. seedlings 40c; for Cordata Basswood (earlier bloom) add 25c each; French Pussy Willow 4-5 ft. (pollen producer) 75c; 3-4 ft., 40c; Red Dogwood shrub 4-5 ft. at \$2.00 per 50; Pink Tartarian or Morowil Honeysuckle shrubs 18-24 inch \$8.50 per 50; 2-3 ft., \$11.00 per 50; 4-5 ft., \$22.00 per 50; BY MAIL PREPAID 1 American Basswood seedlings 12-18 inch or 4 18-24 inch for \$1.00; 2 3-4 ft. at \$1.00; 2 Cordata Basswood 3-4 ft. at \$1.45; 2 4-5 ft., \$2.00; 4 pink Tartarian or 5 Morowil Honeysuckle shrubs 18-24 inch for \$1.00; 2 French Pussy Willow (pollen producer) 3-4 ft. for \$1.00; 3 Red Dogwood shrubs 18-24 inch \$1.00; 10 Siberian Pea Tree seedlings 18-24 inch for \$1.00. Personal check requires 10c. (Our best nectar and pollen producing trees and shrubs). Can ship in March for South. A local Lewis-Dadant dealer. NICOLET COUNTY NURSERY, St. Peter, Minn.

MISCELLANEOUS

DIFFERENT, that's all. Written and published for the instruction of beekeepers, contains breezy entertaining beekeeping comment each month. One year, \$1.00; two years, \$1.50. Sample, 3 cent stamp. Beekeepers Item, San Antonio, Texas.

GET your drawings and construction detail NOW for proven tried BRADSHAW DEMOUNTABLE UNCAPPING PRESS. No more headaches, simple to build your self. Won't rust out, last lifetime. Producers report it greatest improvement in fifty years. No heat required, will not darken honey. Adaptable any size outfit. Send \$2.00 today for PLANS to Bradshaw & Sons, Wendell, Idaho.

Support the Red Cross

PETTIT'S PACKAGE BEES Sold Out for April

Quantity	MAY PRICES 1945—U. S. FUNDS ONLY				
	with queen 2-lbs	no queen 2-lbs.	with queen 3-lbs.	no queen 3-lbs.	queens Extra
1- 2	\$4.00	\$2.75	\$5.00	\$3.80	\$1.25
3-27	3.85	2.65	4.90	3.70	1.20
30-96	3.70	2.55	4.70	3.55	1.15
99 up	3.50	2.40	4.50	3.40	1.10

Quantity	JUNE PRICES 1945—U. S. FUNDS ONLY				
	with queen 2-lbs	no queen 2-lbs.	with queen 3-lbs.	no queen 3-lbs.	queens Extra
1-11	\$3.65	\$2.65	\$4.70	\$3.70	\$1.00
12-99	3.45	2.55	4.45	3.55	.90
100 up	3.20	2.40	4.20	3.40	.80

Try Pettit's Package Bees without queens to boost those weak colonies or early packages so they really produce honey.

Send \$1.00 per package with order, balance ten days before shipping date. Bees leave here in good order. We replace shipping losses of bees and queens if reported promptly with signature of express agent showing percentage of loss, and not blaming us.

MORLEY PETTIT, Tifton, Ga.

Italian Bees 1945 and Queens

2-LB. PACKAGE WITH QUEEN \$3.75

3-LB. PACKAGE WITH QUEEN 4.75
QUEENS \$1.00 EACH

BOOK NOW AND ASSURE DELIVERY

EELLS HONEY & BEE CO.

872 HIGH STREET : HOUMA, LA.

Help us serve MORE producers BETTER

by extending your period of requeening. Daughters of stock bred for resistance to A. F. B. hold a permanent place in modern management for honey production. Write for shipping dates.

IOWA BEEKEEPERS' ASSOCIATION

STATE HOUSE, DES MOINES, 19, IOWA

ITALIANS

QUEENS

CAUCASIANS

Daughters of Queens Bred
for Resistance

Bred to Italian
Drones

\$1.25 EACH, ANY AMOUNT

2-Lb. pkg. bees with queen \$4.00 Over 25 years a shipper in U. S. A.

3-Lb. pkg. bees with queen 5.00 and Canada. Send for free circular

BLUE BONNET APIARIES

Route 1, Box 70, Mercedes, Texas

ARE YOU WONDERING

Where you are going to get your PACKAGE BEES AND QUEENS for April and May? We can accept your orders for Bees and Queens, and get them to you on time.

2-lb. package bees with queen.....\$3.50
3-lb. package bees with queen.....4.50
Queens, \$1.10, or lots 100 or more.....1.00

Our queens are daughters of stock bred for resistance to disease.
We guarantee live delivery.

LUCEDALE APIARIES : LUCEDALE, MISS.

Your Display or Classified Ad in A-B-J Brings Results That Please

NOTICE

PACKAGE BEE BUYERS

We have booked all the orders for packages we can reasonably expect to ship on time through May 15. After that time we have a few open dates for the remainder of the season.

If we have accepted your order you may rest assured that we will do our best to ship it on time with **QUALITY** packages and queens.

Those to whom we had to return orders please accept our regrets. There is a limit to what we can ship and we try not to run over that when accepting orders.

Thanking all with the hope that you will have a profitable season.

ROSSMAN & LONG

P. O. Box 133

Moultrie, Georgia

As we cannot tell what the weather man and the War Department have in store for us would not care to book up any heavier on package bees or queens at this time for early shipment. Have a few open dates around May 20 and later.

PRICES FROM APRIL 15TH TO JUNE 1ST.

	Queen	2-Lb.	3-Lb.	4-Lb.	5-Lb.
1 to 24	\$1.25	\$4.00	\$5.10	\$6.20	\$7.30
25 to 99	1.15	3.75	4.80	5.85	6.90
100 up	1.05	3.50	4.50	5.50	6.50

A. E. SHAW, Shannon, Mississippi

LATE ORDERS

We are booked to capacity through May 15th. If you can accept shipments after that date, we will ship first date available.

PRICES:

	(1 or 2)	(3 to 24)	(27 to 99)	Above
2-Lb. package with queen	\$3.90	\$3.65	\$3.50	\$3.35
3-Lb. package with queen	4.90	4.65	4.50	4.35
4-Lb. package with queen	5.90	5.65	5.50	5.35

For queenless packages deduct \$1.00

For Special Loose Queen Packages add \$1.00. Untested Italian Queens \$1.00 each; Tested \$2.00.

TERMS: All orders should be accompanied with \$1.00 per package deposit to confirm and hold shipping assignment. Balance due before shipping date.

THE PUETT COMPANY, Hahira, Ga.

Italian Package Bees and Queens

FOR 1945 DELIVERY

2-Lb. package with queen	\$4.00
3-Lb. package with queen	5.00

4 percent extra queens with each order. **BOOK YOUR ORDER EARLY AND AVOID DISAPPOINTMENT.**

JOHN S. SHACKELFORD

LIVE OAK, CALIFORNIA

Anderson's Quality Queens and Package Bees

	Queens	2-Lb. Bees	3-Lb. Bees	4-Lb. Bees	5-Lb. Bees
1 to 24	\$1.25	\$4.00	\$5.10	\$6.20	\$7.30
25 to 99	1.25	3.75	4.80	5.85	6.90
100 up	1.25	3.50	4.50	5.50	6.50

We guarantee prompt service and satisfaction.

B. A. ANDERSON & CO.
OPP, ALABAMA

BLUE RIBBON PACKAGE BEES

"BEST IN THE WEST"
THOS. C. BURLESON, COLUSA, CALIF.

MAY AND JUNE

3-Banded Italian Bees and Queens from Northern bred stock of proven quality.

2-Lb. Pkg.	3-Lb. Pkg.	Queens
\$3.50	\$4.50	\$1.10

WICHT APIARIES

406 Miller St.

Hattiesburg, Mississippi

1945 PRICES ITALIAN BEES AND QUEENS

2-lb. pkg. with queen \$3.75; 3-lb. pkg. with queen \$4.75; 4-lb. pkg. with queen \$5.75. Prompt shipment and safe delivery guaranteed, 20% deposit on booking orders.

Order early and play safe.

CLOVER BEE FARM
Address, HESSMER, LA.

3-BANDED ITALIANS

	1-24	25-99	100 up
2-lbs. bees with queen	\$4.00	\$3.75	\$3.50
3-lb. bees with queen	5.00	4.75	4.50

Extra queens each \$1.25

For queenless packages deduct price of queen. 20% deposit to hold shipping date. Balance two weeks before shipping.

W. E. PLANT

HATTIESBURG, RT. 2, MISSISSIPPI

Patronize Our Advertisers

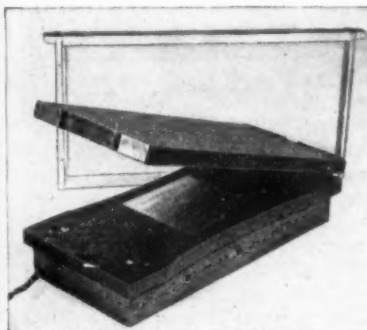
AMERICAN BEE JOURNAL

Italian Package Bees and Queens

	2-Lb.	3-Lb.	4-Lb.	Qu'ns
1 to 24	\$4.00	\$5.10	\$6.00	\$1.25
24 to 99	3.75	4.80	5.85	1.15
100 up	3.50	4.50	5.50	1.05

Kermit Anderson

COFFEE SPRINGS, ALABAMA



Carpenter's Electric Embedder

PATENT PENDING

"Better Bee-Havior"

COPYR.

"It's Complete, It's Simple,
It's Speedy, It's Accurate"
This machine embeds all four wires
at once, evenly, and handles crimp-
wired foundation.
Terms, \$7.50 Cash, f. o. b. Riverside.
Dealers very satisfactory discounts.
Shipping wt. approximately 5½ lbs.

G. A. CARPENTER

4266 Homewood Court
RIVERSIDE, CALIFORNIA

Caucasian Bees & Queens

No more orders accepted for bees and
queens until our ad so states in a later issue
of this journal. Thanks.

BOLLING BEE CO., Bolling, Alabama

Italian Pkg. Bees and Queens

	2-Lb.	3-Lb.
With Queens		
1 to 24	\$4.00	\$5.10
25 to 99	3.75	4.80
100 up	3.60	4.60

Express collect.

No loose queens available

BOND APIARIES

NEW ADDRESS—WIGGINS, MISS.

1945 Prices Italian Pkg. Bees with Queens

2-lbs. and queen \$3.75 ea.; 3-lbs. and
queen \$4.75 ea.; 4-lbs. and queen
\$5.75 ea.; Queenless pkg. 2-lb. \$2.85
ea.; 3-lb. \$3.85 ea.; 4-lb. \$4.85 ea.
20% down books order. Health certifi-
cate and safe delivery guaranteed.

HESSMER BEE FARM

Hessmer, La.

Package Bees - QUEENS - 3-Band Italians

I have a limited number of packages to offer from May 12 to June 1. Send in your
order now for best shipping dates. NO MIRACLES, just a good prolific strain of
Italians, personally reared.

PRICES

Quantity	Queens	2-Lb.	3-Lb.
1-24	\$1.25	\$4.00	\$5.00
25-99	1.15	3.75	4.80
100-up	1.05	3.50	4.50

You will like these bees. 10% deposit with order. Balance before bees are shipped.

EUGENE D. CUTTS : Citronelle, Alabama

NEEDED SUPPLIES—HARD TO BUY (We Have Them)

No. 14—4 frame Non-Reversible Extractor, Hand Power	\$14.75
No. 6—2 Frame Non-Reversible Extractor, Hand Power	11.75
10 Frame Wire Queen Excluders, Wood Bound, 5 or more, each	.80
25 Lb. Lots Thin Surplus Foundation (following sizes) 3 7/8x16, 4 1/2x16 1/2,	
4 1/8x17 1/4, 3 11/16x14 1/4	19.75
25 Lb. Lots "Hercules" Plain Brood Foundation	17.50
25 Lb. Lots "Hercules" Wired Brood Foundation	18.50

Brood Foundation, Sizes 8x16 3/4 or 8 1/2x16 1/2.

HAVE YOU TRIED "HERCULES" WIRED IRONSIDES FOUNDATION?

WITHOUT A DOUBT THE BEST FOUNDATION ON THE MARKET

100 Sheets \$12.50 50 Sheets \$6.50 10 Sheets \$1.35

8 1/2x16 1/2 ONLY

2 Lb. Package Bees with Queen (untested-untreated)	\$ 3.50
3 Lb. Package Bees with Queen (untested-untreated)	4.50
1 Queen Bee, Ultra Violet Ray Treated, each	1.25
Wire Face Bee Veil, each	.80
Bee Escapes, each	.12
Smokers 4x7 each,	1.00
2 Inch Hive Staples, per lb.	.30

COMB HONEY SECTIONS—

No. 1 Grade, 4 1/4x4 1/4x1 7/8, per 500	6.60
No. 2 Grade, 4 1/4x4 1/4x1 7/8, per 500	5.90
No. 1 Grade, 4 1/4x4 1/4x1 7/8, split 3 sides, per 500	7.10
Cellophane Wrappers for above sections, per 100 sheets	1.25
Cellophane Wrappers for above sections, per 500 sheets	5.50
1 Lb. Glass Honey Jars, packed 2 dozen, per case	1.00
2 Lb. Glass Honey Jars, packed 1 dozen, per case	.90
5 Lb. Glass Honey Jars, packed 1/2 dozen, per case	.55
5 Lb. Friction Top Cans, packed 50, per carton	3.75
10 Lb. Friction Top Cans, packed 50, per carton	5.00
Bee Gloves, per pair	.75

TERMS: CASH WITH ORDER, F. O. B. CINCINNATI

WE WILL BUY YOUR HONEY AND BEESWAX AND PAY THE CEILING PRICES

NO LOT TOO SMALL OR TOO LARGE. WRITE US.

We also render wax from your old comb or cappings and work
wax into comb foundation. Write for our general price list.

**THE FRED W. MUTH COMPANY 229 WALNUT STREET
CINCINNATI, 2, OHIO**

PACKAGE BEES and QUEENS

Progeny-Test 3-Banded Italian Strain

Also MRAZ'S and other RELIABLE BREEDERS' STRAINS of High Quality
Daughters of Stock Bred for Resistance.

We can accept orders (mostly small orders) from May 15th and later for
package bees with queens. Also some loose queens.

We will be able to supply queens on short notice beginning end of May or
early June, however, for earliest dates we advise booking far in advance.

HEALTH CERTIFICATE ACCOMPANY ALL SHIPMENTS

	2-Lb. Pkg. With Queen	3-Lb. Pkg. With Queen	Queens
1- 9	\$3.70	\$4.70	\$1.10
10-24	3.60	4.60	1.05
25-99	3.55	4.55	1.00
100 and up	3.45	4.45	.95

QUALITY AND SERVICE

GARON BEE COMPANY Telephone
8614

TELEGRAMS, WESTERN UNION

DONALDSONVILLE, LA.

American Bee Journal Classified Ads Bring Satisfactory Results

YOU WILL BE PLEASED WITH
OUR
DARK ITALIANS
FOR BETTER HONEY PRODUCTION

Prices			
	Queens	2-Lb. with Queen	3-Lb. with Queen
1-24	\$1.15	\$3.75	\$4.75
25-100	1.05	3.50	4.50

May we have the privilege of serving you? Will have queens all summer.

LOUIS L. COUCH
"The Village Beekeeper"
PINEVILLE, LOUISIANA

Thanks for your orders

We are now booked with all orders we can fill until June 1945.

Weaver's Apiaries
NAVASOTA, TEXAS

Sunny Nook Apiaries

We wish to thank all of our many customers for their orders during the past season.

508 W. JEFFERSON STREET
STOUGHTON, WISCONSIN

FOR SALE

BRIGHT YELLOW AND THREE
BAND QUEENS

GRAYDON BROS.

RT. 2 GREENVILLE, ALA.

ITALIAN BEES AND QUEENS

PRICES TO JUNE 1

	Queen	2-Lbs.	3-Lbs.	4-Lbs.
1-24	\$1.25	\$4.00	\$5.10	\$6.20
25-99	1.15	3.75	4.80	5.85
100-up	1.05	3.50	4.50	5.50

Shipping Point Epes, Alabama

LITTLE BROS.

SUMTERVILLE, ALABAMA

NOTICE

Three-Banded Italians

2-Lb. package with queen at \$4.00
3-Lb. package with queen at 5.00
Queenless bees per lb. at 1.25

No extra queens

DUPUIS APIARIES

Andre Dupuis, Prop.
BREAUX BRIDGE, LOUISIANA

THE POSTSCRIPT

The good wife and I have spent most of the month of February in a visit to Mexico. We found a very interesting country with great beekeeping possibilities. In the vicinity of Mexico City they boast of the most even climate in the world with but little change throughout the year. It is delightfully warm, like June, at midday but cool enough for a wrap when the sun goes down. Strawberries were ripe and green corn and other summer vegetables were in the market so it was hard to realize that ice and snow still ruled at home.

— V —

Many of our readers are acquainted with C. R. Kellogg who for several years was in charge of beekeeping at Massachusetts College of Agriculture. He also served as assistant to Dr. Eckert in California. Later he spent several years in China but now he is doing extension work in Mexico. Most of the bees in Mexico are kept in rough boxes and the beekeeper simply cuts out a portion of the honey from time to time. There are no frames or supers and little is understood about modern methods of honey production.

— V —

Kellogg's work is very practical. He puts a modern hive or two in the box hive apiary and lets results show for themselves. When enough honey has been produced to pay for the outfit it becomes the property of the villager and the funds are used to pay for another somewhere else. So little money is available that work goes painfully slow. I have wondered whether it might not be possible to raise a fund in this country to extend these demonstration apiaries and make it possible for Kellogg to reach many more villages with such demonstrations.

— V —

From Ing. Pablo Aragon Leiva, who is in charge of beekeeping in the Mexico Department of Agriculture, we heard the story of the Colmenero bird which was new to me. It seems that this bird catches the bees when working flowers of the eucalyptus tree and eats only the honey sacs while discarding the dead body of the insects. Beekeepers finding the dead bees consider the flowers as poisonous, not knowing about the bird.

— V —

When we left Hamilton in late January the ice was fifteen inches thick on the Mississippi River above the dam and snow half knee deep.

When we reached the vicinity of Cuernavaca, Mexico we found the bees storing honey in the supers. A wild cherry was in full bloom and apparently was yielding nectar freely along with a great variety of other flowers.

— V —

We were much interested in cement hives in use in that area. Since the weather remains about the same throughout the year they do not seem to have the objectionable features which limit their use in this region. At midday the weather is balmy like June and cool after sundown. The cool nights offer something of a problem to the beekeeper since the bees behave differently under such conditions than they do where the nights are warm. The country is mountainous and the bees may find a honeyflow at higher levels at one season and at lower levels at another from different plants. The elevation varies several hundred feet within flying range of the bees.

— V —

H. L. McClain, of Morrison, Tennessee, says that crimson clover gives him a fine crop of excellent honey and that it sells like hot cakes too. It blooms early and is in full flower about May 10. Crimson clover is an annual but quick returns for both honey and hay is just the thing.

— V —

Seed sent from New Guinea by two Iowa soldiers, Norval Baker and Wilmer Hudnut, was planted in our test garden on May 16, 1944. The plants which hold some semblance to sweet clover appear to be a species of crotalaria. They bloomed freely and set some seed but no bees were observed to visit the flowers. Coming from a warm country we hardly expected them to reach the seed stage. Many interesting plants from far places have thus come to our test garden.

— V —

S. M. Pattee, of Cedar Rapids, Iowa, is making study of pollen grains in honey. In a sample of fall honey sent from Hamilton he identified pollen grains from eleven different sources beside several which he was unable to recognize. This is an indication of the number of plants on which the bees may work at a time when no major flow is on. We would suggest that beemen from the West and South send him samples of their honey. There may be some surprises as to sources from which the honey comes.

FRANK C. PELLETT.

1896 **50** 1944

Years' Experience

Although one year ahead of our Golden Anniversary, we are offering A Golden Opportunity to beekeepers to obtain all the COMB HONEY SECTIONS, HIVES, FRAMES AND SUPERS needed to handle the record honey crop anticipated this season. We have on hand and ready for shipment the restricted items listed above.

Our one piece honey sections are all made from this year's stock of choice WISCONSIN SECOND GROWTH BASSWOOD and selling at pre-war prices. Quantity discounts available.

In view of the continued shortage of paper so essential to the War effort, we did not print a catalogue in 1944, but as in the past our 1942 prices still prevail, in most cases. Or if you will send us a list of the items needed we will gladly quote prices. Remember our quantity discounts when ordering.

MARSHFIELD MFG. CO.
MARSHFIELD, WISCONSIN

ROOT Service

From

Chicago

MAY THIS BE THE LAST
WARTIME YEAR
IS OUR WISH

This must be the wish of every beekeeper too who would serve more efficiently in his vocation.

This business wills to aid and encourage efficient beekeeping. We cannot now promise all you want in supplies and services. We can promise that we will work continually to obtain and stock supplies and try to be ready for your demands. We would be responsive always to the needs of beekeepers.

Ask for our prices on bee supplies, books and literature, honey packages and containers. Write us your list of things wanted. Help yourself by ordering early the things you want.

WE WANT HONEY AND BEESWAX FOR CASH OR IN
TRADE FOR SUPPLIES.

A. I. ROOT CO. OF CHICAGO
224 West Huron Street
CHICAGO, ILLINOIS

YORK'S

Package Bees & Queens

Quality Bred Italians

Booking orders now for late May and June shipping. Ample young laying queens available during late May and throughout the summer.

2-lb. packages of bees with queens \$4.25 each
3-lb. packages of bees with queens 5.25 each
Young laying queens 1.30 each

Queenless packages, deduct \$1.10 per package.

York Bee Company
Jesup, Georgia, U. S. A.
(The Universal Apiaries)

Package Bees

2-lb. \$4.00

3-lb. \$5.00

Italian Queens

\$1.25 each

HASTINGS' APIARIES

ELMER HASTINGS, Mgr.

150-S. Morris St. : MESA, ARIZONA
(Valley of the Sun)



—bought yesterday
—fine service today
—valuable investment tomorrow

• • • •

**THREE-PLY FOUNDATION
TRIPLE-LOCKED FRAMES
STRONG SQUARE SECTIONS
STURDY, EFFICIENT EXTRACTORS
A FULL LINE OF QUALITY ITEMS**



Yesterday, today and tomorrow the **ROOT COMPANY** has given and will always give to the beekeepers the best bee supplies it is possible to produce. Today, delivery on raw material such as lumber and metal is extremely slow. Naturally, we, like the beekeepers who order from us, have placed our orders well in advance for shipment when available. We have thousands of dollars worth of orders from beekeepers waiting for goods. Root Bee Supplies are certainly popular.

About all we can say is that beekeepers should check carefully their requirements and mail their lists as soon as possible. Orders will be filled in order received at best prices authorized by the government.

**THE A. I. ROOT CO.
MEDINA, OHIO**